

SDMS US EPA REGION V -1

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Planning Research Corporation

00045

137707

**REVIEW OF
FEASIBILITY STUDY REPORT
JOHNS-MANVILLE DISPOSAL AREA
WAUKEGAN, ILLINOIS**

REVISED LETTER REPORT

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, D.C. 20460**

Work Assignment No. : 234
EPA Region : 5
Site No. : 54A5 (C)
Date Prepared : March 1986
Contract No. : 68-01-7037
PRC No. : 15-2342-56
Prepared By : PRC Environmental
Management, Inc. and
INTERA Technologies, Inc.
Telephone No. : (312)938-0300
EPA Primary Contact : Rodney Gaither
Telephone No. : (312)886-4745

**ENFORCEMENT
CONFIDENTIAL**

**PRIVILEGED WORK PRODUCT PREPARED
IN ANTICIPATION OF LITIGATION**

INTRODUCTION

Johns-Manville Sales Corporation (now Manville Sales Corporation) is conducting a Remedial Investigation/Feasibility Study (RI/FS) for the 120-acre waste disposal area at its Waukegan, Illinois manufacturing plant. Manville is performing this work under the terms of a Consent Order with U.S. EPA Region 5 that was signed on June 14, 1984 (United States Bankruptcy Court, 1984). EPA approved the RI report (KMA, 1985a) in November 1985. In December 1985, Manville and their consultant, Kumar Malhotra & Associates, Inc. (KMA), held preliminary discussions with EPA concerning potential remedial alternatives for the site. Manville and KMA submitted a Feasibility Study Report that evaluates these alternatives in February 1986 (KMA, 1986).

PRC Environmental Management, Inc. and INTERA Technologies, Inc. previously reviewed the draft and final RI reports for the site and took part in the preliminary discussions of remedial alternatives. As part of our continuing assistance to EPA under TES 2 Work Assignment No. 234, PRC and INTERA reviewed the FS report. We considered the following factors in this review:

- o Effectiveness of remedial alternatives in eliminating environmental releases from the site
- o Technical adequacy of remedial alternatives and applicability to site conditions
- o Compliance of remedial alternatives with requirements of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (U.S. EPA, 1985b)

In addition, we evaluated the report for conformance with EPA's Guidance on Feasibility Studies under CERCLA (U.S. EPA, 1985a) and with the terms of the Consent Order.

DISCUSSION

The disposal area comprises 120 acres of the 300-acre Waukegan plant site. There are four currently active units within the disposal area:

- o A series of unlined settling and filtration basins that treat and recycle process wastewater
- o A disposal pit for sludge removed from the settling basins

- o An asbestos disposal pit
- o A disposal pit for non-asbestos plant wastes

PRC and INTERA assumed in this review that the four active units do not treat or dispose of hazardous wastes as defined under RCRA (40 CFR 261). We also assumed that these units are managed in compliance with all applicable federal, state, and local regulations, since it is beyond the scope of work for this assignment to make such a determination.

The FS report (KMA, 1986) presents an accurate summary of the problems caused by past waste disposal practices at the Manville Waukegan plant. The major problem identified in the RI report (KMA, 1985a) is the airborne dispersal of contaminants from the site. Air emissions are caused by current activities in the disposal area or by wind erosion of inactive portions of the disposal area. The RI report identified asbestos and lead as the contaminants of most concern. Air monitoring studies conducted during the RI showed elevated on-site air concentrations of asbestos compared to off-site concentrations. Lead concentrations in air were measured in a separate study (KMA, 1985b). These study results indicated that on-site air concentrations of lead were no higher than off-site concentrations. All lead concentrations measured were below the National Ambient Air Quality Standard for lead of 1.5 ug/m³.

The RI also investigated potential ground-water contamination at the site. The potential sources of contamination were identified as process water seepage from the settling ponds, infiltration to the ground water through the sludge disposal pit, and infiltration to the ground water through soils containing contaminants such as lead.

Sampling results subsequent to the RI report indicated that the process water was of relatively good quality (KMA, 1985b). A complete ion analysis was not performed, so the process water might still contain constituents that have not been identified. However, no major ions seemed to be missing from the analysis, and contaminants of most concern, metal cations and organics, had negligible concentrations. Thus, seepage of process water to the ground water should be of little concern in designing remedial alternatives.

Seepage or infiltration through the sludge pit was not demonstrated to have a significant effect on ground-water quality. However, sample results from the two monitoring wells closest to the sludge disposal area indicate higher total dissolved solids (specific conductivity) and carbonate contents than samples from the other three on-site wells.

The FS report presents a detailed evaluation of five remedial alternatives. These alternatives were developed to fit the five categories of remedial alternatives required by 40 CFR 300.68(f). The categories and alternatives are as follows:

1. No action alternative. The no action alternative proposed by the FS report includes provisions for ground-water monitoring of the waste disposal area.
2. An appropriate alternative that does not attain applicable or relevant standards. The FS report proposes grading the site, applying a 3-inch soil cover on most surfaces, followed by fertilizing and seeding.
3. An alternative that attains applicable or relevant standards. The FS report proposes grading the site, applying a 6-inch compacted cover on most surfaces, applying a 3-inch cover of top soil, followed by fertilizing and seeding. The 6-inch compacted cover meets the requirements for inactive asbestos disposal areas as specified by the National Emission Standards for Hazardous Air Pollutants (NESHAP) in 40 CFR 61.153.
4. An alternative that exceeds applicable or relevant standards. The FS report proposes constructing an on-site landfill. All wastes in the disposal area would be excavated and placed in this landfill. The landfill will be designed to meet RCRA double liner requirements and will include leachate collection and detection systems.
5. An alternative for treatment or disposal at an off-site facility. The FS report proposes excavating all wastes within the disposal area and transporting these wastes to an off-site landfill.

The FS report evaluates each alternative in detail according to the criteria outlined in 40 CFR 300.68(h). These criteria include cost (including operation and maintenance costs), technical feasibility, effectiveness in minimizing threats to the environment, adverse effects of implementing the alternative, compliance with

regulations and standards, and time required to implement the alternative. This evaluation appears to comply fully with the requirements of the NCP. Additionally, the FS report covers all considerations required by EPA's Guidance on Feasibility Studies under CERCLA and the requirements stipulated in paragraph IV of the Consent Order.

The FS report recommends that the third alternative listed above be chosen for remedial action at the site. This alternative (6-inch compacted soil cover followed by top soil and revegetation) will address inactive portions of the 120-acre disposal area; the waste management units within the disposal area that are currently used will remain active. The soil cover and vegetation alternative would reduce future releases of airborne contaminants from the disposal area, assuming that the cover and vegetation are adequately maintained.

This alternative will also provide some measure of ground-water protection. The compacted cover and the regrading of the site will reduce infiltration of precipitation. The alternative includes annual surface and ground-water monitoring for a period of 30 years. Thus, there would be some means to detect potential future ground-water problems. Although the alternatives for on-site and off-site land-filling would provide greater ground-water protection, they would also require more extensive excavation of the site. This could lead to increased air emissions of asbestos during remedial action, offsetting some of ground-water protection benefits.

During this work assignment, we also reviewed EPA CERCLA enforcement actions that have been taken at other asbestos disposal areas. Our review included NPL, proposed NPL, and non-NPL sites in EPA Regions 1, 2, 3, and 9. Although few of these sites have gone completely through the RI/FS process, several sites are now in the early stages of an RI. At most of the sites, EPA has taken removal actions under 40 CFR 300.65.

All removal actions and remedial actions that we reviewed consisted of the application of cover over the asbestos disposal sites. We are not aware of any site where EPA required a large scale excavation of disposed asbestos-containing material. The depth of soil cover applied to the various sites has ranged from 6 inches to 5 feet. In most cases, EPA has required a cover in excess of the minimum 6-inch thickness

plus vegetation specified by NESHAP. EPA has been reluctant to accept the NESHAP minimum cover because of concerns about the long-term effects of erosion and continued site use (Dalton, 1985).

Recent guidance issued by EPA's Office of Solid Waste (OSW) (U.S. EPA, 1985c) recommends a minimum cover thickness of 30 inches for final closure of an asbestos disposal area. This recommendation is based partly on work done by the Army Corps of Engineers (COE) at the Cold Regions Research Laboratory in Hanover, New Hampshire. Research has shown that the action of freezing and thawing of the ground can cause an upward migration of pebbles, rocks, and asbestos-containing materials. As a result, the COE recommended a 30-inch cover for New England asbestos sites (Dalton, 1985; Groulx, 1986). To prevent freeze-thaw effects, the top of the asbestos layer should be below the mean freeze line in the soil after the cover has been installed.

The remedial alternative recommended by the FS report is consistent with previous EPA enforcement actions at asbestos sites in that it leaves the waste in place. However, the thickness of the proposed cover is not consistent with recent OSW guidance and with most other removal and remedial actions implemented under CERCLA. The Johns-Manville disposal area is located in an area that has a climate similar to that of New England. Thus, the COE recommendations concerning freeze-thaw effects should also be considered. In light of all of these factors, it may be appropriate to apply a cover thicker than the one recommended by the FS report.

Covering with vegetation appears to be the most cost-effective remedial action. It provides substantially equivalent protection to either of the landfilling alternatives at a much lower cost. KMA's recommended alternative is estimated to cost \$3.1 million (present worth, discounted at 10 percent over 30 years). This is more than an order-of-magnitude lower than the estimated costs for on-site landfilling (\$38.6 million) or off-site landfilling (\$70.6 million). Increasing the thickness of the cover would increase the cost of the recommended alternative; however, the cost would still be lower than either of the landfilling alternatives.

We would suggest two additional measures to improve the alternative recommended by the FS report. First, the alternative calls for air monitoring by means of personal samplers during waste handling and grading operations. The purpose of this monitor-

ing is to evaluate worker exposures on-site. We suggest the addition of ambient air monitoring at the plant property lines or at the edges of the disposal area. This would allow Manville to assess the potential for off-site migration of airborne asbestos during remedial activities, since this is equally of concern. If the results of this monitoring indicate problems, dust control measures for waste handling and grading could be adjusted accordingly. Second, if the sludge disposal area will be closed in the near future, we suggest that a cover of reduced permeability (higher clay content) be considered for this area. Of the active waste disposal units, the sludge disposal area seems to be the most likely potential source of future groundwater contamination. Application of a reduced permeability cover would add a level of protection at little additional cost.

Additional specific comments concerning the Feasibility Study Report are included in Attachment A to this report.

SUMMARY

The Feasibility Study Report submitted by Manville and KMA satisfies applicable requirements of the NCP, EPA's Guidance on Feasibility Studies under CERCLA, and the terms of the Consent Order between Manville and U.S. EPA Region 5. With the exception of the no action alternative, all alternatives should reduce air emissions of asbestos from the disposal area. This was the primary concern identified during the RI for this site. Ground-water protection is a secondary concern at the site since sampling results to date have shown negligible contamination. Again, with the exception of the no action alternative, all proposed remedial alternatives should provide some measure of ground-water protection. The on-site and off-site landfilling would provide the greatest ground-water protection but would also have the largest negative impact during implementation.

KMA selected "soil covering with vegetation" as the recommended remedial alternative. This alternative involves regrading the inactive areas of the site and applying a 6-inch compacted soil cover that complies with NESHAP requirements. This would be followed by a 3-inch top soil layer that would be revegetated with grass and shrubs. The alternative also includes ground-water monitoring of the disposal area and surface water monitoring of Lake Michigan for up to 30 years. The soil

covering with vegetation alternative addresses the site problems indentified during the RI. Estimated costs for this alternative are substantially lower than either of the landfilling alternatives.

We agree that covering the asbestos-containing waste in place is preferrable to the large scale excavation that would be required for off-site or on-site landfilling. However, the thickness of the cover proposed in the FS is not consistent with recent Office of Solid Waste guidance on final closure of asbestos disposal areas. This guidance recommends a minimum cover thickness of 30 inches. In previous CERCLA enforcement cases involving asbestos disposal sites, EPA has generally required a cover thicker than the one proposed in the FS. We recommend that the FS consider an additional remedial alternative. This alternative should include a thicker cover that is more in line with EPA policy and guidance.

REFERENCES

- Dalton, D.S., 1985. U.S. EPA Enforcement Approach to Asbestos Site Cleanup, in The 6th National Conference on Management of Uncontrolled Hazardous Waste Sites, Hazardous Materials Control Research Institute, Washington, DC. November 4-6.
- Groulx, Paul, 1986. On-Scene Coordinator, U.S. EPA Region 1, telephone conversation with John Dirgo, Environmental Scientist, PRC Environmental Management, Inc. March 24.
- Kumar Malhotra & Associates, Inc., 1985a. Final Remedial Investigation Report, Johns-Manville Disposal Area, Waukegan, Illinois. July.
- Kumar Malhotra & Associates, Inc., 1985b. Technical Memorandum # M-2, Analysis of Common Inorganic Anions in Surface and Ground Water and Ambient Air Quality Monitoring for Lead and TSP. September.
- Kumar Malhotra & Associates, Inc., 1986. Feasibility Study Report, Johns-Manville Disposal Area, Waukegan, Illinois. February.
- United States Bankruptcy Court, 1984. Administrative Order by Consent between Johns-Manville Sales Corporation, Waukegan, Illinois and United States Environmental Protection Agency Region V. June 14.
- U.S. Environmental Protection Agency, 1985a. Guidance on Feasibility Studies under CERCLA. Washington, D.C.
- U.S. Environmental Protection Agency, 1985b. National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule. 50 Federal Register 47912. November 20.
- U.S. Environmental Protection Agency, 1985c. Asbestos Waste Management Guidance: Generation, Transport, Disposal. Office of Solid Waste, Washington, DC. EPA/530-SW-85-007.

ATTACHMENT A

**SPECIFIC COMMENTS ON
FEASIBILITY STUDY REPORT
JOHNS-MANVILLE DISPOSAL AREA
WAUKEGAN, ILLINOIS**

**SPECIFIC COMMENTS ON
FEASIBILITY STUDY REPORT
JOHNS-MANVILLE DISPOSAL AREA
WAUKEGAN, ILLINOIS**

Page	Comment
1-1	We do not agree with the statement (2nd paragraph) that on-site air quality does not appear to be affected by releases of asbestos. The fact that asbestos concentrations were higher on-site than off-site indicates that there is some air quality impact, even if this impact is small.
2-5	Previous statements (page 2-1) indicated that asbestos fibers are no longer used in manufacturing processes at the Johns-Manville Waukegan plant. If this is true, it is not clear why the asbestos disposal pit continues to receive asbestos waste (1st paragraph). The report should identify the source of this asbestos waste. This comment also applies to the last paragraph on page 2-10.
2-15	The second paragraph should probably be revised. It now reads "There is no migration of any contaminant from the site." We feel that the statement "Based on monitoring data collected during and after the RI, there is no current evidence that contaminants are migrating from the site" is more appropriate.
2-16	The first paragraph should also state that lead is released from the disposal area to ambient air, even though monitoring data have shown that the quantity released is small.
3-12	<p>There is no current evidence to suggest that the inorganic lead found at the Manville disposal site is a human or animal carcinogen. The first paragraph should be revised accordingly.</p> <p>The statement in the last paragraph that ground water "is not of concern at this site" should probably be revised. An appropriate revision would be "ground-water contamination does not appear to be a problem at this site at this time."</p>
4-4	The description of grading and drainage near the waste disposal pits (1st and 3rd paragraphs) need to be clarified. The report seems to suggest that runoff will be channeled into the disposal pits. It would be more appropriate to reduce infiltration through these areas by directing runoff away from the disposal pits.
4-5	The plan to test soils brought to the site for contamination (3rd paragraph) is a good one. Specific criteria for accepting or rejecting the soil can be defined at a later time.
4-6	The OSHA standards for asbestos are reported incorrectly in the first paragraph. The numbers are correct, but the units are in error. The standards should be expressed in fibers per cubic centimeter.

- 5-7 Information appears to be missing from the first numbered item on this page. It is not clear why the Clean Water Act is mentioned here since it is not included in the subsequent discussion.
- 5-8 In the section concerning RCRA Compliance, additional sections of RCRA may be relevant and appropriate (although not legally applicable) to the remedial alternatives that are proposed. These sections would include portions of Subparts G (Closure and Post-Closure) and N (Landfills) of 40 CFR 264 and 265.
- 5-10 The score of 0 for "OSHA Compliance" for the landfilling alternatives is questionable. However, changing this score would probably not affect the relative rankings of the alternatives.
- 5-14 We do not understand the reasons for the large differences in scores for the various alternatives under "Compliance with Water Quality Requirements During Implementation."
- 5-19 Some of the scores for "Improvements in Biological Environment" are questionable. However, changes in the scores would probably not affect the relative rankings of the alternatives.



217/782-6760

Refer to: L09719014 -- Lake County
Waukegan/Johns-Manville
Superfund/General Correspondence

March 17, 1986

Norm Niedergang
USEPA
230 South Dearborn
Chicago, Illinois 60604

Dear Norm:

Recent inquiries by IEPA into the status of the Johns-Manville project have revealed that a breakdown in communication has occurred between the USEPA Project Manager, and the IEPA Project Manager.

IEPA has in the past requested to be kept informed of scheduled meetings and to participate in the review and comment responsibilities for the project. Also we have requested that when this site progresses to the stage that the Administrative Order be amended or a new one developed that IEPA be a party with USEPA to that process (refer to Wm. Blakney letter 5-29-85).

A request from IEPA to participate in future activities was again made to USEPA personnel in November of last year (refer to Memorandum 11-25-85). We are at this time, again requesting that IEPA be allowed to participate in the Johns-Manville activities.

Jeff Larson, Project Manager has replaced Steve Dunn on this project. He has reviewed the files and has been in communication with Rodney Gaither and Dan Caplice (telephone 312/886-0397, 3-11-86) to review the projects present status and request a copy of the Final R.I. and Draft Feasibility Study. It is our understanding that the review period for this document is near its deadline and that an expeditious review and summary of comments would be appreciated by USEPA.

RECEIVED
MAR 20 1986
U.S. EPA
NORTH CENTRAL REGION
CHICAGO, ILL. 60604



Page 2

Although recent lines of communications between USEPA and IEPA have suffered a little setback we believe that with a little maintenance the active participants can once again establish a healthy transfer of communication through periodic updates.

Thank you.

Sincerely,

Robert K. Cowles

Robert K. Cowles, P.E., Manager
Federal Site Management Unit
Remedial Project Management
Division of Land Pollution Control

RKC:JL:bjh/0567F/49,50

Attachments

cc: Jim Frank, IEPA
Jeff Larson, IEPA
Ken Becheley, IEPA - Maywood
Karen Yeates, USEPA
Rodney Gaither, USEPA
Dan Caplice, USEPA
Don Gimbel, IEPA - Maywood
Babbet Newberger - Attorney USEPA
Gary King, IEPA Attorney
Gloria Craven, IEPA
Ed Lyn, IEPA - Maywood
Author
Division File

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
	(Record of item checked above)	
TO: R. Baither, H&EB	FROM: Jeff Larson, IEPA (217) 782-3335	DATE: 4-8-86 TIME: 3:20 pm
SUBJECT: John - Manville		
SUMMARY OF COMMUNICATION <p>Jeff said he is sending documents pertaining to earlier comments between U.S. EPA and IEPA. Jeff also stated the regulations state that the "Fill Mat'l" should have at least 5% clayey material and no more than 50% of it containing sand & gravel.</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED		
INFORMATION COPIES TO:		

**RECORD OF
COMMUNICATION**

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Records of how checked above)

TO: R. Gaither, HWEB

FROM: Pete Wendue, State
Water Survey (333-4261)

DATE 4-7-86

TIME 10:15 Am

SUBJECT: Johns - Manville

SUMMARY OF COMMUNICATION

Pete said the average (mean) frost depth in Waukegan, Illinois for soil would be 40" or less. He couldn't send document because they are (Water Survey Division) busy putting together information concerning that.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO: R. Daitler, HWEB

FROM: Jeff Larson, IEPA
(217) 782-3335

DATE 4-3-86
TIME 10:35 AM

SUBJECT: Johns - Manville

SUMMARY OF COMMUNICATION

Jeff and I discussed the fact that U.S. EPA proposes that J-M uses 30" of cover in comparison to IEPA's proposal of 24". It was explained to Jeff that we based our comments on the new Office of Solid Waste guidance and other asbestos sites where there were some type of action taken. I told Jeff that I would discuss with Babette Neuburger (ORC) that EPA could propose that J-M place 30" of topsoil and place a flexible liner under the disposal area as well. I explained to Jeff the procedures that EPA would follow, for example, approving the FS, the 30 day public comment period, negotiating with J-M about the RD/RA stage and so on.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

P.S. This conversation was held in lieu of the fact that Jeff could not make it for the meeting here in Chicago.

INFORMATION COPIES

TO:

**RECORD OF
COMMUNICATION**

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO: *L. Gaither, HWEB*

FROM: *Kumar Markotia,
Contractor for T-M*

DATE *4-1-86*
TIME *3:15 pm*

SUBJECT: *Johns - Manville*

SUMMARY OF COMMUNICATION

Kumar wanted to know what was going on with the Feasibility Study (FS) comments. I told him we are recommending 30" of cover and will return comments to T-M after EPA's and the State's comments can be organized.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE	
		<input type="checkbox"/> OTHER (SPECIFY) _____	
		(Record of item checked above)	
TO: R. Galt Rev, H&EB	FROM: Marvin Clumpus, (303) 978-2790, J-M	DATE: 4-1-86	TIME: 2:30 pm
SUBJECT: Johns - Manville			
SUMMARY OF COMMUNICATION <p>Marvin wanted to know how the review of the Feasibility Study (FS) was coming along. I told him the attorney (Babette Neuberger) was reviewing my comments. I also related the fact to Marvin that the agency wanted at least 30" of cover over the disposal area. The 30" of cover is mentioned in the updated version of the Office of Solid Waste Guidance. Marvin also has been told that the State's comments will also be forwarded.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

MAR 27 1986

The Johns - Manville Maukegan Disposal Area

Rodney G. Gaither, RPM
IL/IN Unit, 5HE-12
CERCLA Enforcement Section

James Bland, 5GL

I'm sending you the draft Feasibility Study Report (FS) regarding the Johns - Manville facility in Maukegan, Illinois. Since the Agency does not usually display draft documents to the public, this report is of no exception. This report is to remain confidential until the 30 day public commentary period begins, which follows after the FS is finalized. Also, since you mentioned the fact that the reason you wanted to see the draft FS was because you are working on some kind of report concerning the Maukegan area, I would like to see a copy of that report, even before it becomes final.

If there are any further questions, feel free to contact me.

FOIA
EXEMPT

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO: Rodney Gaither, HWEB	FROM: Paul Groult, Region I	DATE: 3-24-86	TIME: 3:15 pm
SUBJECT: Johns - Manville			
SUMMARY OF COMMUNICATION			
<p>Paul discussed the fact that J-M has a plant in Region I. There was an Emergency Removal there, where J-M was required to cover the disposal (asbestos) area with 30" of soil topcover. Region I didn't require J-M to do any air monitoring for asbestos in the future because there will not be any further dumping of the contaminant there. The 30" of soil topcover included 18" of background soil, 6" of Sandy Loam, and 6" of Sandy Topsoil to prevent erosion and increase the chances of grass to grow.</p> <p>Paul's address is: U.S. EPA - Region I 60 West View Street, Lexington, Mass. 022173. He also suggested that if I wanted to know about Pb migration or anything relating to it, give Tom Spittle, Lab Director, a call.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
<p>1</p>			
INFORMATION COPIES TO:			

5HE-12

Mr. Jim Bland
Great Lakes National Program Office
536 South Clark Street
Chicago, Illinois 60604

Re: The Johns-Manville Waukegan Disposal Area

Dear Mr. Bland:

Per our conversation on February 11, 1986, I am sending you a copy of the Final Remedial Investigation Study. The Feasibility Study that was received from Johns-Manville cannot be released to the public as yet because it is still in draft form.

If there are further questions, feel free to contact me.

Sincerely,

Rodney G. Gaither
Remedial Project Manager

RGG:clm:WMD:HWEB:CES:IL/IN Unit:2/11/86

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		(Record of item checked above)	
TO:	Kumar Malkotra 616/361-5092	FROM:	R. Gaither, HWEB
		DATE	2-10-86
		TIME	2:10 pm
SUBJECT Johns - Manville			
SUMMARY OF COMMUNICATION <p>Kumar informed me that he sent the Feasibility Study Documents (3) to me on Friday 2-7-86, by federal express. I told Kumar the documents hadn't been received as yet.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
(Record of item checked above)			
TO: R. Gaither, HWEB	FROM: Kulman Malhotra, KMA	DATE: 1-23-86	TIME: 10:15 AM
SUBJECT: John - Manville			
SUMMARY OF COMMUNICATION			
<p>Kulman called to inquire whether or not he had to list all remedial alternatives and explain each one. I told him yes, he should. Kulman said he would try and submit the draft FS by 2-7-86. He also stated some relative figures concerning the alternatives. They were:</p> <ul style="list-style-type: none"> • Off-site Disposal would probably cost approx. \$60 mil • On-site disposal ^{approx} = \$20-30 mil • 6"-9" of cover with vegetation approx = \$2.5 mil • 12" of cover (not clay cover) without vegetation approx = \$2.7 mil • Each inch of soil would approx. cost = \$60,000 			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

WORK ASSIGNMENT CLOSEOUT

DATE: November 8, 1985

FROM: Rodney Gaither (Gaither)
Regional Site Project Officer

TO: Randall Kaltreider
REM-Deputy Project Officer

WA NO.: 61-5LA5.1

SITE NAME: Johns-Manville

ACTIVITY: RI/FS

INSTRUCTIONS FOR PROCESSING "WORK ASSIGNMENT CLOSEOUT"

- 1) SPM initiates and submits form to RPSO.
- 2) RPSO completes form, gets REM-RPO signature and returns form to SPM.
- 3) SPM forwards completed form to ZPMO (Attn: AZPM-Admin.). SPM retains copy for project file.
- 4) Original form sent to ZPMO for contract file.
- 5) ZPMO sends copies to REM-DPO and CO, EPA HQ.

RECEIVED

NOV 18 1985

PLANNING AND CONTRACTS
MANAGEMENT UNIT

____ Assignment completed and project can be closed.

☒ Assignment incomplete.

Additional work required: The Final Remedial Investigation has been approved by U.S.EPA. There has already been a work assignment amendment typed up concerning the assistance of a contractor to help out with the Feasibility Study.

Rodney Gaither 11-19-85
RPSO Approval Signature/Date

Gregory L. Vandelaar
REM-RPO Approval Signature/Date
11/25/85

cc: CO, EPA HQ

Mailed 11/26.
LK

CHAIHILL
6/8/84

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO: Steve Moser, Esq.
303/978-2672

FROM: R. Baither,
HWEB

DATE 11-18-85

TIME 10:30 am

SUBJECT Johns - Manville

SUMMARY OF COMMUNICATION

I called Steve to see if Dec. 13, 1985 would be alright to meet with him and others for an evaluating^{FS} report on J-M. Steve said he would contact other reps. from J-M to confirm the date. The date is 12-13-85, 10:00am at the Agency. Representatives from J-M that will be there are, Dave Burford, Kumar, Moser, and Clumpus. I told Steve, along with myself, would be. Neuberger and our contractor.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
	(Record of item checked above)	
TO: Dean Olmstead, J-m	FROM: L. Baither, HWEB	DATE 11-13-85 TIME 3:15 pm
SUBJECT: Johns - Manville		
SUMMARY OF COMMUNICATION <p>Dean said he would contact me later about the meeting date for The FS.</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED		
INFORMATION COPIES TO:		

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
	(Record of item checked above)	
TO: L. Daiter, HWEB	FROM: K. Malhotra, KMA	DATE 11-7-85 TIME 2:40 pm
SUBJECT: Johns-Manville		
SUMMARY OF COMMUNICATION <p>Kumar ^{told me of} submitted possible meeting dates that representatives of J-M and himself could get together with U.S. EPA on regarding negotiations over the feasibility study (FS). The dates were Dec. 11, 12, & 13 and Dec 17-20. I told Kumar I would call the attorney (B. Neuberger) and get back to him on a date. Kumar asked about the an FS already approved to be submitted to him. I told him I didn't have anyone's approval to submit one to him. He then said he might request one under the FOIA request. Also Dec. 4, 5, 6 were mentioned as possible dates.</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED		
INFORMATION COPIES TO:		

345-12

OCT 30 1985

Mr. Marvin Clineous
Project Coordinator
Johns-Manville Service Corporation
P.O. Box 3101
Denver, Colorado 80217

Dear Mr. Clineous:

The U.S. Environmental Protection Agency (U.S. EPA) approves the final Remedial Investigation Report (RI), along with all modifications, for the Johns-Manville Disposal Area in Hankeran, Illinois. The Agency recommends that both parties, U.S. EPA and Johns-Manville, decide on a meeting date to discuss the Feasibility Study (FS).

If there are any questions, please feel free to contact me.

Sincerely,

Rodney S. Saiter
Remedial Project Manager

bcc: R. Diefenbach
S. Neuberger

RG:clm:CES:IL/IN Unit:10/30/85

6850 Austin Center Boulevard
Suite 300
Austin, Texas 78731
Telephone: (512) 346-2000
Telex: 792 352
Telecopy: (512) 346-9436

INTERA

Technologies Inc.

October 11, 1985

Mr. Rodney Gaither
Hazardous Waste Enforcement Branch
Environmental Protection Agency
230 South Dearborn
Chicago, IL 60604

Reference: Work Assignment No. 234

Dear Rodney,

This letter presents a brief review of the Technical Memorandum No. M-2 "Analysis of Common Inorganic Anions in Surface and Ground Water". The referenced memorandum was performed in response to our earlier review outlining a limitation in the RI report.

RECEIVED
OCT 16 1985
U.S. EPA, REGION V
WASTE MANAGEMENT DIVISION
HAZARDOUS WASTE ENFORCEMENT DPA

Review Summary

The contractor for Johns-Manville, Kumar Malhotra and Associates, has measured specific conductance, pH, chloride, sulfate, nitrate, and carbonates for the five monitor wells, Lake Michigan water, and the industrial canal. From these ground water monitor wells there appears to be no ground water quality problem. The previous cation analysis (April 1985) and the present anion analysis (July 1985) show no exceedance of drinking water standards. Since we have no evidence to indicate that there could be a contaminant plume which has simply not reached the monitor wells yet, we have concluded that there is no significant ground water contamination from the present operations.

Additional Comments

Even though the new data indicate no ground water contamination problem we were quite disappointed in the results presented in Technical Memorandum No. M-2. The reasons for this disappointment are as follows:

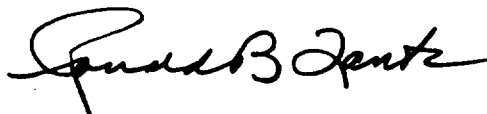
- (1) the surface waters sampled (industrial canal and Lake Michigan water) were inadequate to help understand the flow system at the site. Our original review requested sampling the discharges -- settling basin, mixing basin, etc. These analyses would have added substantially to the understanding of the ground water flow system and the potential contamination movement in the ground water.

Mr. Rodney Gaither
October 11, 1985
Page Two

- (2) the analyses performed (specific conductance, pH and a few anions) was inadequate to provide verification that all important ions had been analyzed. Good geochemical sampling/analysis would conduct a wide spectrum analysis so that a cation/anion balance could be conducted to validate the sampling technique as well as the analyses procedures. To provide a crude check of the analyses we have compared an estimate of TDS (estimated as 60% of the specific conductance) with the sum of anions and probable important cations. This crude method does not indicate there is a problem of a missing anion of large concentration.
- (3) KMA have contoured values of specific conductance, bicarbonate-alkalinity, and temperature. Each of these contours are inconsistent with the data from all the ground water monitor wells. The contours apparently disregard the measured data from MW-3. If MW-3 is included, the ground water flow instead of being north across the site and then east to Lake Michigan, is almost directly east to Lake Michigan. With contours which recognize data at MW-3, a ground water mound due to seepage from the settling, mixing, and collection basins appears probable. This would, of course, only be important if discharge water to these basins contained significant contaminants. Since we do not have an analysis of any discharge water, the above possibility cannot be eliminated. However, based upon the measured hydraulic conductivities, we would have estimated travel time from such a water mound to the ground water monitor wells to be only a few years. Since no significant contaminants have been measured at the monitor wells we conclude that it is unlikely significant contaminants are in the discharge waters.

If you have questions or comments regarding our review please contact us.

Sincerely,



Ronald B. Lantz
President

RBL/jk1

H05234C001

INTERA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

RECEIVED

SEP 30 1985

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SEP 25 1985

U.S. EPA, REGION V
WASTE MANAGEMENT DIVISION
HAZARDOUS WASTE ENFORCEMENT BRANCH

MEMORANDUM

SUBJECT: Response to Region V Request for Enforcement Support,
Johns-Manville Site

FROM: Elizabeth A. Dutrow, *Elizabeth A. Dutrow*
Chemist
Field Studies Branch
Exposure Evaluation Division (TS-798)

TO: Rodney Gaither, RPM
Hazardous Waste Enforcement Branch/Region V

The following memo discusses the Final Remedial Investigation Report, Volumes I and II, on the Johns-Manville Waukegan Disposal Site. As you recall, the original sampling and analysis protocol and the Quality Assurance Plan were prepared with support from the Exposure Evaluation Division (EED). To facilitate the review, the main author of the protocol was again called upon to review the final report. Each of your requests are answered below.

1) Evaluate data on airborne asbestos.

Upon review of the documents, it is evident that the original protocols and Quality Assurance Plan have been reproduced in the "Consent Order," which requires Johns-Manville to carry out the Remedial Investigation. The air sampling program, conducted by Eric Chatfield, is identical to the plan within the Consent Order. No fault is found with this activity.

The airborne levels detected are consistent with Chatfield's previously reported ambient levels. Additionally, a recent study conducted by EED displayed similar ambient levels (Evaluation of Asbestos Abatement Techniques, Phase I). Hence, the conclusion by Chatfield that the levels of the Manville Site are not elevated is reasonable.

2) Evaluate the need for further remedial action at the site, based on the asbestos test.

The Johns-Manville levels appear to be consistent with the reported airborne data available. Note, however, should the site or asbestos characteristics undergo any sort of change

which would result in an increase of friability in the asbestos, materials, additional remedial action may be necessary. Periodic sampling would detect any changes in the airborne levels. Is periodic sampling a form of "further remedial action?" If so, then periodic sampling would be appropriate.

- 3) Compare the airborne asbestos test to other reliable airborne asbestos tests that have been done before.

As stated previously, the design and Quality Assurance Plan are well-developed. The execution of the work followed the plan, and the analyst has a good reputation. Additionally, the airborne asbestos levels are low.

- 4) Recommend how the airborne asbestos problem at this site can be better described in the Endangerment Assessment.
- 5) Recommend how the asbestos problem in water samples can be better described in the Endangerment Assessment.

Further detail is necessary to adequately the issues. ?
How is the current description deficient?

- 6) Recommend a suitable way to address the issue on health and safety of the public on drinking liquids containing asbestos.

Please refer to the attached pages from the National Research Council's Study "Asbestiform Fibers: Nonoccupational Health Risk" (1984). The attached pages (119-123) discuss studies examining the consumption of water containing millions of fibers per liter. These levels are similar to those reported in the technical memorandum M-1, "Asbestos Analysis of Water Samples by Electron Microscopy." Since the results - ?
the NRC study are unclear, I suggest that you contact Dr. James Millette. Dr. Millette works for EPA in Cincinnati (within your Region). His phone number is FTS-684-7462. He may also provide some further assistance to you as an additional reviewer. (Dr. Millette has examined the issue of asbestos in water supplies in this country.)

Attachment

No longer
file (EPA)
↓
Tom Powers FTS 684 7550
or
Bill Keane

Summary

Persons residing in areas in Turkey where asbestiform fibers are present in the environment and persons living in the same household as workers exposed to asbestos develop mesothelioma at a rate in excess of that for the general population. The evidence is based primarily on clinical observations and on case-control studies that do not permit generalization. It seems likely that these mesotheliomas arise from respiratory exposure to asbestiform fibers.

EPIDEMIOLOGICAL STUDIES OF EFFECTS RESULTING FROM THE INGESTION OF ASBESTOS IN DRINKING WATER

Epidemiological studies of the effects of asbestos in drinking water in six geographical areas of the United States and Canada have been extensively reviewed and critiqued (Marsh, 1983; Workshop on Ingested Asbestos, 1983). In all these studies, a possible excess incidence of gastrointestinal (GI) cancers was evaluated as were morbidity or mortality rates for some other cancers. In addition, the National Research Council's Safe Drinking Water Committee addressed this problem and estimated the risk of excess GI cancers associated with ingesting asbestos in drinking water (National Research Council, 1983a).

Tables 5-1, 5-2, and 5-3 summarize the characteristics and results of the various studies. Duration of exposure ranged from as little as 20 years (in Duluth⁶) to more than 50 years (in Quebec); asbestos concentrations ranged from less than detectable limits to $1,300 \times 10^6$ fibers/liter. Except for Duluth, where taconite mine tailings were dumped into Lake Superior, the subjects were exposed to chrysotile from natural sources (in Quebec, the San Francisco Bay area, and Puget Sound) or from asbestos-cement pipes (in Utah and Connecticut).

The studies did not indicate consistent excesses of cancer. In Duluth, no consistent type of cancer occurred in excess among residents (Levy *et al.*, 1976; Mason *et al.*, 1974; Sigurdson *et al.*, 1981). In Quebec, cancer mortality was evaluated in relation to asbestos in municipal water supplies. In the first study (Wigle, 1977), 22 municipalities were grouped into three categories based on level of asbestos in water supplies. In a more extensive study (Toft *et al.*, 1981), mortality rates for two cities with high exposure ($>100 \times 10^6$ fibers/liter) were compared with 52 low exposure cities ($<5 \times 10^6$ fibers/liter). Some excess cancers in males that were noted in the two studies were attributed to probable occupational exposure. In Connecticut, tumor registry data indicated that there was no association

⁶The particles in Lake Superior were mostly acicular cleavage fragments rather than asbestiform fibers (T. Zoltai, personal communication, 1983). See also Langer *et al.*, 1979.

TABLE 5-1. Characteristics of Asbestos Exposures from Drinking Water in Different Study Populations^a

Location of Study	Exposure Characteristics			
	Type of Asbestos	No. of Fibers per Liter (Range)	Size of Population Exposed	Maximum Duration of Exposure (Years)
Duluth	Amphibole ^b	1-30 x 10 ⁶	100,000	15-20
Connecticut	Chrysotile	BDL ^c -0.7 x 10 ⁶	576,800	23-44
Quebec	Chrysotile	1.1-1,300 x 10 ⁶	420,000	50
Bay Area, California	Chrysotile	0.025-36 x 10 ⁶	3,000,000	40
Utah	Chrysotile	NA ^d	24,000	20-30
Puget Sound	Chrysotile	7.3-206.5 x 10 ⁶	200,000	40

^aFrom Marsh, 1983.

^bMost of these particles were probably acicular crystals rather than asbestiform fibers (T. Zoltai, University of Minnesota, personal communication, 1983). Langer *et al.* (1979) referred to the particles as amphibole gangue minerals and discussed the uncertainties in determining whether they are asbestiform.

^cBDL = below detectable limit.

^dNA = not available.

between asbestos risk scores and GI tumor incidence (Harrington *et al.*, 1978; Meigs *et al.*, 1980). In San Francisco, there were inconsistent excesses of some cancers (Conforti *et al.*, 1981; Kanarek *et al.*, 1980; Tarter, 1981). In Puget Sound, a proportional incidence analysis comparing length of residence suggested an excess for some GI cancers (Polissar *et al.*, 1982).

All of the epidemiological studies had limitations. Perhaps the most serious were the substantial problems in classifying exposure because population data rather than individual data were used. Errors in classification will tend to weaken any true associations that may exist between asbestos in drinking water and health effects. Given the difficulty of determining individual exposure, results of these epidemiological studies cannot be taken as strong evidence about the extent to which ingestion of drinking water containing asbestiform fibers might increase the risk of GI cancer. The NRC Safe Drinking Water

TABLE 5-2. Summary of Studies of Gastrointestinal Cancer in Relation to Ingested Asbestos by Cancer Site^a

Association of GI Cancer with Asbestos, by Site ^b (ICD 7th Revision Codes)											References
Location	All Sites (150-159)	Esophagus (150)	Stomach (151)	Small Intestine (152)	Colon (153)	Rectum (154)	Biliary Passages/ liver (155-156A)	Gall Bladder (155.1)	Pancreas (157)	Perito- neum (158)	
Duluth	(++)	(+-)	(++)	NS	(00)	(++)	(00)	NS	(0+)	NS	Mason <i>et al.</i> , 1974
Duluth	(--)	(00)	(+0)	(00)	(--)	(00)	(00)	(00)	(++)	(00)	Levy <i>et al.</i> , 1976
Duluth	(00)	(00)	(00)	(00)	(00)	(00)	(00)	(00)	(0+)	(00)	Sigurdson <i>et al.</i> , 1976
Connecticut	NS	NS	(00)	NS	(00)	(00)	NS	NS	NS	NS	Harrington <i>et al.</i> , 1978
Connecticut	NS	NS	(00)	NS	(00)	(00)	NS	NS	(+0)	NS	Meigs <i>et al.</i> , 1980
Quebec	(00)	(00)	(+0)	NS	(00)	(00)	NS	NS	(0+)	NS	Wigle, 1977
Quebec	(+0)	(00)	(+0)	NS	(00)	(00)	NS	NS	(00)	NS	Toft <i>et al.</i> , 1981
Bay Area, Calif.	(++)	(0+)	(++)	(00)	(00)	(00)	(00)	(0+)	(0+)	(++)	Kanarek <i>et al.</i> , 1980
Bay Area, Calif.	(++)	(++)	(++)	(00)	(+0)	(00)	(00)	(00)	(++)	(0+)	Conforti <i>et al.</i> , 1981
Bay Area, Calif.	(++)	NS	NS	NS	NS	NS	NS	NS	NS	NS	Tarter, 1981
Utah	NS	NS	(00)	(00)	(0-)	(00)	NS	(0+)	(00)	(00)	Sadler <i>et al.</i> , in press
Puget Sound	(00)	NS	(00)	NS	(--)	NS	NS	NS	NS	NS	Severson, 1979
Puget Sound	NS	(00)	(00)	(++)	(00)	(00)	(00)	(00)	(00)	(00)	Polissar <i>et al.</i> , 1982

^aFrom Marsh, 1983.

^b(Male, female) association with ingested asbestos.

+, positive; 0, no association; - negative; NS, not studied.

TABLE 5-3. Summary of Studies of Risk from Cancer Other Than Gastrointestinal Cancer in Relation to Ingested Asbestos, by Cancer Site^a

Location	Association of Cancer Other Than GI with Asbestos, by Site ^b (ICD 7th Revision Codes)									References
	Buccal Cavity and Pharynx (140-148)	Bronchus, Trachea and Lung (162,163)	Pleura (162.2)	Prostate (177) (males only)	Kidney (180)	Bladder (181)	Brain/CNS ^c (193)	Thyroid (194)	Leukemia, Aleukemia (204)	
Duluth	NS	(+0)	NS	NS	NS	NS	(00)	NS	(00)	Mason <i>et al.</i> , 1974
Duluth	NS	NS	NS	NS	NS	NS	NS	NS	NS	Levy <i>et al.</i> , 1976
Duluth	NS	(00)	NS	NS	NS	NS	NS	NS	NS	Sigurdson <i>et al.</i> , 1976
Connecticut	NS	NS	NS	NS	NS	NS	NS	NS	NS	Harrington <i>et al.</i> , 1978
Connecticut	NS	(00)	NS	NS	(00)	(00)	NS	NS	NS	Meigs <i>et al.</i> , 1980
Quebec	(00)	(+0)	NS	0	(00)	(00)	(00)	NS	(00)	Wigle, 1977
Quebec	(00)	(+0)	NS	0	(00)	(00)	(00)	(00)	(00)	Toft <i>et al.</i> , 1981
Bay Area, Calif.	NS	(+0)	(0+)	0	(00)	(00)	(00)	(00)	(00)	Kanarek <i>et al.</i> , 1980
Bay Area, Calif.	NS	(00)	(0+)	+	(00)	(00)	(00)	(00)	(00)	Conforti <i>et al.</i> , 1981
Bay Area, Calif.	NS	NS	NS	NS	NS	NS	NS	NS	NS	Tarter, 1981
Utah	NS	NS	NS	NS	(+0)	NS	NS	NS	(+0)	Sadler <i>et al.</i> , 1981
Puget Sound	NS	NS	NS	NS	(00)	NS	NS	NS	NS	Sevenson, 1979
Puget Sound	(00)	(00)	NS	+	(00)	(00)	(+-)	(++)	(+-)	Polissar <i>et al.</i> , 1982

^aFrom Marsh, 1983.

^b(Male, female) association with ingested asbestos.

+, positive; 0, no association; -, negative; NS, not studied.

^cCNS = central nervous system.

Committee (1983a), using a variety of assumptions, estimated the excess risk of GI cancers that might be expected from ingestion of asbestos-containing drinking water and concluded that their risk estimates are consistent with the results of the epidemiological drinking water studies considered.

OCCUPATIONAL EPIDEMIOLOGICAL STUDIES--METHODOLOGICAL CONSIDERATIONS

Evaluation of potential health effects from nonoccupational exposure to asbestiform fibers depends primarily on results of epidemiological studies of occupational groups. Most of the analyses have involved cohort⁷ studies of workers exposed to asbestos of various types and in a variety of industries and occupations. Much information has been obtained from these studies. However, they also suffer from limitations common to many epidemiological studies and from some additional problems related to determining dose (exposure) and response (health end point, such as death from a specific cause). Despite the limitations of individual studies, the committee finds that, when all the studies are considered, exposure to asbestos increases the risk of developing lung cancer, mesothelioma, asbestosis, and possibly other cancers.

To quantify health risks from an exposure, it is necessary to obtain dose-response data, but exposure measurements are particularly difficult to obtain. Because of the long latency period for asbestos-associated diseases, investigators have found it necessary to try to reconstruct past exposures. Techniques of measurement vary from place to place and over time (Acheson and Gardner, 1980; Dement *et al.*, 1983a). For example, fiber counts obtained by light microscope in various industrial settings may need to be multiplied by a factor varying from 2 to 8 to obtain a true count of fibers longer than 5 μm .

Typically, a cumulative dose measurement is used. This does not take into account the time lapsed since last exposure nor does it distinguish between short exposures of high intensity and long exposures to low dust concentrations. In addition, a cumulative dose measurement does not change when exposure ceases. Variability in these exposure-related

⁷The two major types of epidemiological studies are cohort studies and case-comparison studies. In a cohort study, a group with certain defined characteristics of exposure is selected and followed to determine the number of members reaching a particular end point, such as death, by a specified time. The group is called a cohort. In its purest form, the analysis of a cohort study depends entirely on within-cohort comparisons, and the results may be presented as arrays of morbidity or mortality rates or by a large variety of other expressions of association or correlation. A cohort might comprise two major groups, differentiated by their exposure experience. However, in occupational studies, especially of cancer, the rate of occurrence of death or disease in the group is often compared with the rate in some

(continued)

PRC Engineering

Suite 600
303 East Wacker Drive
Chicago, IL 60601
312-938-0300
TWX 910-2215112
Cable CONTOWENG

prc

Planning Research Corporation

Johns-Manville

October 7, 1985

Mr. Rodney Gaither
Hazardous Waste Enforcement Branch
U.S. EPA Region 5
230 South Dearborn Street
Chicago, IL 60604

Dear Mr. Gaither:

PRC Environmental Management, Inc. has reviewed "Technical Memorandum #M-2: Analysis of Common Inorganic Anions in Surface and Ground Water and Ambient Air Quality Monitoring for Lead and TSP", September 1985. This report was prepared by Kumar Malhotra & Associates, Inc. (KMA) for the Johns-Manville Disposal Site in Waukegan, Illinois. PRC's review, conducted as part of TES 2 Work Assignment No. 234, focuses on the air monitoring study (conducted by Clayton Environmental Consultants under subcontract to KMA) and includes the following sections of Technical Memorandum #M-2: Sections 1.0, 2.0, and 4.0; Appendices M-2-A and M-2-C. INTERA Technologies, Inc. is reviewing portions of the Technical Memorandum related to surface and ground water and will submit their review in a separate letter report.

PRC agrees with the conclusions of the Technical Memorandum that "the Johns-Manville disposal area does not appear to be releasing lead to the atmosphere" and that ambient air lead levels do not "pose a threat to the human health or environment in the vicinity of the disposal area." PRC also agrees that the total suspended particulate (TSP) levels measured during the study do not "exhibit any adverse impact on human health or environment." All on-site ambient air concentrations of lead and TSP measured in the study were below the applicable National Primary and Secondary Ambient Air Quality Standards (NAAQS) as published in 40 CFR Parts 50.6 and 50.7 for TSP and 40 CFR Part 50.12 for lead.

In reviewing Technical Memorandum #M-2, PRC noted two study procedures that deviated from the study plan submitted by KMA in their July 3, 1985 letter; three calculations that appear to be in error; and one area where the presentation of study results could be improved. These items are described briefly below. It should be stated, however, that these items, either individually or in combination, are not likely to affect the study conclusions.

1. Page 5 of Section 4.0 of Technical Memorandum #M-2 indicates that 0.2 inches of precipitation were recorded by the National Climatic Data Center (NCDC) during the third sampling period. The study plan indicated that test runs would be repeated if precipitation greater than 0.1 inch occurred during the run. The Technical Memorandum states that in spite of the NCDC's measurements, "no rainfall of any significance was observed in the air sampling area" during the third test run. Rainfall may have occurred during a period when sampling personnel were not present to observe it. The Technical Memorandum does not mention on-site precipitation measurements. In the absence of these measurements, the recorded NCDC precipitation data should have taken precedence over the subjective judgements of sampling personnel. The third test run probably should have been repeated, based on the acceptability criteria outlined in the study plan.
2. The July 3 study plan stated that sampling air flows would be between 39 and 60 cubic feet per minute (cfm) as required by 40 CFR 50, Appendix B, the reference method for TSP sampling with high-volume air samplers. Appendix B to Section 4.0 of the Technical Memorandum indicates that sampling at 4 of the 10 stations was conducted at air flows significantly (up to 50%) higher than the 60 cfm maximum. It is not possible to quantify the effects of higher air flows on sample results, although it is likely that the reported results underestimate the true ambient concentration. Although additional air is pulled into the sampler, particles within the air will have greater momentum near the sampler inlet. The flow path through the inlet to the filter is curved and larger particles with greater momentum will not be able to make the turns, thereby escaping collection.
3. Three of the sample flows presented in Appendix B to Section 4.0 of the Technical Memorandum appear to be calculated incorrectly. When sample flow is measured with an orifice meter as appears to have been done, sample flow is roughly proportional to the square root of Delta H. The flow rates listed for Site 1/Run 1, Site 2/Run 3, and Site 3/Run 1 are not consistent with this relationship. The flow for Site 1/Run 1 is overestimated, assuming Delta H is correct; the flows for Site 2/Run 3 and Site 3/Run 1 are underestimated if Delta H values are correct. Correction of the air flows would not significantly affect the calculation of TSP or lead concentrations.
4. The presentation of the mass of lead per filter in Appendix B to Section 4.0 of the Technical Memorandum is confusing. The numbers in the "Lead (Milligr)" column appear to have been corrected for recovery of spiked samples but not for the presence of lead in field blank filters. The field blank value of 0.02 mg must be subtracted from the "Lead (Milligr)" column prior to dividing by the total air volume in order to arrive at the air concentrations presented. The tables should have indicated that the lead values were not corrected for field blank results. This comment

Mr. Rodney Gaither
October 7, 1985
Page 3

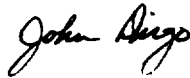
concerns the clarity of the presentation but does not change the reported results.

Again, because of the very low lead concentrations measured by the study (roughly two orders of magnitude below the NAAQS for lead), none of these problems should affect KMA's conclusion that air lead concentrations at the Johns-Manville Disposal Site do not pose a significant public health or environmental threat.

Please contact me if you have any questions concerning PRC's comments on the air lead study.

Sincerely,

PRC Environmental Management, Inc.



John Dirgo
Environmental Scientist

JD/mrj

cc: Nancy Deck (2 copies)
Bruce Bakaysa
Seth Dibblee

Inter-Office
Correspondence

prc

PRC Engineering

To Rodney Gaither

Date 20 September 1985

From John Dirgo

Subject New address--Ron Lantz

INTERA has moved some of their offices from Houston to Austin. Ron's new address and phone number are:

Ron Lantz
INTERA Technologies, Inc.
6850 Austin Center Boulevard
Suite 300
Austin, TX 78731

Phone: (512)346-2000

RECEIVED

SEP 23 1985

U.S. EPA. REGION V
WASTE MANAGEMENT DIVISION
HAZARDOUS WASTE ENFORCEMENT BRANCH

CH2M HILL Southeast, Inc.
1941 Roland Clarke Place
Reston, Virginia 22091

Contract No. 68-01-6692

Contract Estimated Cost.....\$137,760,895

Contract Base Fee..... 4,132,827

Award Fee awarded and vouchered prior to
submission of this voucher..... 2,655,276

Award Fee available prior to submission of
this voucher..... 3,372,394

Total.....\$147,921,392

Summary of Claimed Current and Cumulative Costs,

Base Fee Earned, and Award Fee Awarded

Site: Johns-Manville, IL
Activity: Community Relations Plans
Work Assignment Number: 07-5VA5.0
For Period: 7/25/85 - 8/24/85

Major Cost Element	Current Amount Claimed	Cumulative Amount Claimed
1. Raw Direct Technical Labor	\$ 708.34	\$ 1,649.07
2. Ecology and Environment, Inc.	0.00	0.00
3. Subcontracting Pool	0.00	0.00
4. Travel	0.00	101.93
5. Equipment	0.00	0.00
6. Other Direct Costs	68.40	204.16
7. Total Direct Costs	\$ 776.74	\$ 1,955.16
8. Overhead (41%* of item 1)	290.42	676.11
9. Total Cost Exclusive of G&A	\$ 1,067.16	\$ 2,631.27
10. G&A Expense (121%* of item 1)	857.09	1,995.38
11. Total Cost	\$ 1,924.25	\$ 4,626.65
12. Base Fee (3% of item 11)	57.73	138.81
13. Award Fee Awarded	0.00	0.00
14. Amount Claimed	\$ 1,981.98	\$ 4,765.46
15. Amount Previously Reimbursed	---	2,783.48
16. Current And Previously Unpaid	---	\$ 1,981.98

*Provisional Rate

INV040

W65903.00

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER SPECIFY:

(Name of person called above)

TO: R. Baither,
HWEB

FROM: Tom Powers (EPA
Cinn)
FTS - 684 - 7550

DATE 10-3-85
TIME 9:05 am

SUBJECT: Johns - Manville

SUMMARY OF COMMUNICATION

I talked to Tom regarding asbestos fibers in water. Tom said that if in a situation where fibers were contained in water, and the water dried up, then fibers could be emitted in the air. He said there ~~was~~ no scientific data to conclude that fibers obtained in the gastrointestinal tract would produce cancer or any other threat to human health. He said he would send a copy of a report from a symposium that was held discussing such a topic.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES
TO:

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO: Elizabeth Dutrow,
FTS 382-3978

FROM: R. Gaither,
HWEB

DATE 10-10-85
TIME 8:40 AM

SUBJECT: Johns - Manville

SUMMARY OF COMMUNICATION

Ms. Dutrow told me that the reviewer didn't find anything wrong with the Endangerment Assessment written by J-M's contractor. She said everything appeared to be alright.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO: R. Gaither, HWEB	FROM: Kumar Malhotra, (616) 361-5092	DATE: 10/21/85	TIME: 10:15 am
SUBJECT: Johns - Manville			
SUMMARY OF COMMUNICATION <p>Kumar reported that he used temperature, elevation and the anion plots to indicate the groundwater flow. He stated that even if a broader spectrum of parameters had been analyzed for, the numbers wouldn't have been too small to predict a flow direction. I told Kumar the asbestos report looked pretty good, I also said the response to the RI would be submitted soon.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO: R. Daith, HWEB	FROM: Ron Lantz, Intera (512) 346-2000	DATE: 10-8-85	TIME: 2:50 pm
SUBJECT: Johns-Manville			
SUMMARY OF COMMUNICATION <p>Ron returned my call, and said he basically didn't approve of the surface and groundwater results submitted by J-M. There wasn't a wide enough spectrum of anions analyzed nor was there a concentration of contaminants in the settling basins. He will send a memo to this effect by 10-15 or 10-16-85.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
(Record of item checked above)			
TO: Rodney L. Britter, HWEB		FROM: Kumar Malkotra, (616) 361-5092	
		DATE: 10-22-85 TIME: 2:10 pm	
SUBJECT: Johns - Manville			
SUMMARY OF COMMUNICATION <p>Kumar said he only sampled at the Industrial Canal. The results were low. He said the IEPA sampled the other Canals in 1981, with low results being reported. Kumar said because of the mounding effects at the site, the groundwater direction is to the North, then East. The regional direction is from West to East.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED 			
INFORMATION COPIES TO:			

prc

Planning Research Corporation

PRC Engineering
Suite 600
303 East Wacker Drive
Chicago, IL 60601
312-938-0300
TWX 910-2215112
Cable CONTOWENG

RECEIVED

AUG 26 1985

Program
Support Section

August 23, 1985

RECEIVED

AUG 26 1985

Ms. Nancy Deck
TES-2 Project Officer
Office of Waste Programs Enforcement (WH527)
U.S. EPA
401 M. Street, S.W. Room 301
Washington, D.C. 20460

PLANNING AND CONTRACTS
MANAGEMENT UNIT

Dear Ms. Deck:

PRC Environmental Management is pleased to submit, for your review and Contract Officer approval, the work plans for Work Assignment Nos. 88, 183, and 234 initiated under Contract No. 68-01-7037. Also included are the original work plans for Work Assignment Nos. 347, 351, and 357. Please refer any site-specific questions directly to the work plan preparers.

Should you have any questions or wish to discuss these plans with me directly, please feel free to do so.

Thank you for your continuing assistance and cooperation.

Sincerely,

PRC Environmental Management, Inc.



Thomas D. Brisbin
Deputy Program Manager

TDB/md
enclosure

cc: Marian Bernd, HQ (copies of all WAs enclosed)
Kathy Hodgkiss, Region 3 (WA 347, 357)
Seth Dibblee, Region 5 (WA 234)
Bert Cole, Region 4 (WA 88, 183 and 351)



Planning Research Corporation

PRC Engineering
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Chicago, IL 60601
312-938-0300
TWX 910-2215112
Cable CONTOWENG

TECHNICAL REVIEW OF DOCUMENTS FOR

JOHNS-MANVILLE SITE

WAUKEGAN, ILLINOIS

REVISED WORK PLAN

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, D.C. 20460

Work Assignment No.	:	234
EPA Region	:	5
Site No.	:	54A5 (C)
Date Prepared	:	August 21, 1985
Contract No.	:	68-01-7037
PRC No.	:	15-2342-56
Prepared By	:	PRC Environmental Management, Inc. (John Dirgo)
Telephone No.	:	312/938-0300
EPA Primary Contact	:	Rodney Gaither
Telephone No.	:	312/886-4745

Approved:

Thomas D. Brisbin
Deputy Program Manager

Robert J. Van Osten
Chief of Administration

ENFORCEMENT
CONFIDENTIAL

PRIVILEGED WORK PRODUCT PREPARED
IN ANTICIPATION OF LITIGATION

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1.0 INTRODUCTION

The Johns-Manville site covers about 300 acres of which 120 acres have been used for dumping waste materials since the early 1920's. The site is located on the west shore of Lake Michigan in Waukegan, Lake County, Illinois. Disposed wastes include asbestos, chromium, lead, and organic solvents. The total disposal area consists of four sub-areas - the friable asbestos disposal pit, the scrap disposal area, the wet waste basin (unlined settling basins), and the sludge disposal area. An accurate record of the volume of waste disposed does not exist because of the long history of operations at the site.

On June 14, 1984 Johns-Manville Corporation agreed by Consent Order to:

- (a) monitor airborne asbestos on and off-site
- (b) sample on-site soil
- (c) perform a water balance
- (d) prepare geotechnical and hydrological studies
- (e) prepare a remedial investigation and feasibility study

The initial work assignment required PRC Environmental Management, Inc. and INTERA Technologies, Inc. to review background documents on the Johns-Manville site and to review and comment on the March 1985 Draft Remedial Investigation (RI) Report prepared in response to the Consent Order. These comments were submitted via letter reports to the EPA Primary Contact in April 1985.

Johns-Manville (through their contractor, Kumar Malhotra and Associates, Inc.) has prepared a final RI report addressing some of the issues raised by the PRC and INTERA letter reports. In addition, further field investigations suggested by PRC and INTERA are planned for the Johns-Manville site. Amendment No. 2 to this work assignment provides additional funding for PRC to review and comment on the final RI report and for PRC and INTERA to attend negotiating sessions with Johns-Manville.

2.0 PROJECT APPROACH

PRC and INTERA have assigned key personnel who will be capable to serve, if needed, in negotiating sessions with Johns-Manville in an expert capacity. PRC personnel will review and comment on air monitoring studies conducted at the Johns-Manville site while INTERA will cover all other technical areas of the work assignment.

Under Amendment No. 2, PRC and INTERA will continue work initiated under the original work assignment. The additional tasks required are:

Task 1. Final Remedial Investigation Review

PRC will review the final RI report submitted to EPA by Johns-Manville. The review will focus on how the final RI report has addressed the areas of concern noted in the draft RI report. The final RI will be evaluated for technical adequacy and for compliance with applicable sections of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). A letter report containing PRC's comments will be submitted to the Primary Contact within 2 weeks of receipt of the final RI report.

Task 2. Attend Meeting with Johns-Manville

PRC and INTERA will attend meetings in Chicago to advise and assist EPA Region 5 personnel in negotiations with Johns-Manville. The timing of these meetings remains to be determined.

3.0 DELIVERABLES

The deliverables required under Work Assignment No. 234, Amendment No. 2 include the letter report described under 2.0 Task 1 above and any monthly progress reports required. All work products generated under this work assignment are considered "Enforcement Confidential" and will be labeled as such.

PRC and INTERA personnel will be available to discuss any findings via teleconference with the EPA Region 5 Primary Contact and the staff attorney.

4.0 WORK SCHEDULE

	July	August	September	October
	1 15	1 15	1 15	1 15 31
Task 1: Final Remedial Investigation Review	x——x			
Task 2: Attend Meetings with Johns-Manville		←—————x—————→		

Deliverables:

Letter Report		x			
Monthly Progress Reports	x		x	x	x

5.0 PERSONNEL

PRC Environmental Management, Inc.

TES PROGRAM MANAGER

Wallace J. Beckman

Central Operations Manager
(Deputy Program Manager)

Thomas D. Brisbin

PRC Project Manager, Work Assignment No. 234

John Dirgo
(312) 938-0300 X 292

INTERA Technologies, Inc.

Project Manager, Work Assignment No. 234

R. B. Lantz

(512) 346-2000

6.0 INTERVIEW/SUBCONTRACTORS/CONSULTANTS

None required.

7.0 EXCEPTIONS TO THE ASSIGNMENT OR ANTICIPATED PROBLEMS

PRC and INTERA take exception to the period of performance suggested by Amendment No. 2. It is unlikely that a meeting with Johns-Manville could be scheduled by the August 31, 1985 completion date in Amendment No. 2. A revised close-out date of October 31 is suggested to provide a longer time interval within which the meeting could take place.

As noted in Section 1.0 of this work plan, there are two ongoing or planned field investigations at the Johns-Manville site. These are a sampling program to measure on- and off-site air concentrations of lead and a sampling program to measure common inorganic anions in ground water. A review of this additional field work by PRC and INTERA is not included in the cost estimate in Section 9.0. Should such a review be requested by EPA, the level of effort for this work assignment will have to be increased.

8.0 QUALITY ASSURANCE

PRC's Quality Assurance Program, dated April 23, 1984, has been specifically incorporated by reference into the contract governing this work assignment. This Work Plan and all subsequent activities and outputs may correspondingly be the subject of a random audit pursuant to that QA program plan, and carried out by the Contract QA officer. The audit results and any corrective action will be included in the Monthly Progress Report and Annual Report.

9.0 COST ESTIMATE - Work Assignment No. 234

HOURS

PRC LOE	70
INTERA LOE	80
Total LOE	<u>150</u> =====
PRC Clerical	12
INTERA Clerical	12
Total Clerical	<u>24</u> =====
TOTAL HOURS	174

DOLLARS

Direct Labor	\$ 4,671
Travel	355
ODCs	500
Indirect Costs	7,357
Subtotal Costs	<u>\$ 12,883</u>
Fee	932
Total WA Cost Estimate	<u>\$ 13,815</u> =====

LOE HOURS: Level of Effort Hours includes billable time for personnel such as engineers, scientists, draftsmen, technicians, statisticians and programmers, but not support personnel such as company management, typists and key punch operators.

CLERICAL HOURS: Includes billable time for clerks, typists, etc.

DIRECT LABOR: Direct Labor charges related to LOE and clerical labor hours are directly attributable to a specific work activity authorized by a work assignment. Such work assignment labor would be necessary to produce a particular end product, or provide a particular service. Direct Labor charges are calculated by multiplying an individuals directly chargeable time by his hourly rate.

TRAVEL: Travel costs incurred in carrying out work activity authorized by the work assignment included in this category are such things as airfare, ground transportation, meals, and lodging.

ODCs: Other Direct Costs are incurred in carrying out work activities authorized by a work assignment. Expert witness fees, long distance telephone charges, postage and other document delivery charges, and duplication and reproduction are examples.

INDIRECT COSTS: These are types of costs which are not directly related to a specific work activity, but are "support-type" costs that are necessary for the company to incur in order to continue operations and, hence, need to be incorporated in the accounting system because they are costs of doing business. Such costs would normally include rent, insurance, indirect labor costs of "support-type" personnel, depreciation, supplies, etc. These various types of overhead costs are accumulated in groups called "overhead pools." The number of "overhead pools" can range from one to several hundred depending on the complexity of operations. The most commonly used "overhead pools" are Fringe Benefits, Overhead, and General & Administrative Expense. Since different firms have their own "overhead pool" nomenclature, all such costs were aggregated into the indirect costs category.

FEE: The portion of a contractor's charges also known as profit. Profit generally is characterized as the basic motive of business enterprise and represents a projected monetary excess realized by a contractor after deduction of costs (both direct and indirect) incurred in performance of a task.

PRC Engineering

Suite 600
303 East Wacker Drive
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Planning Research Corporation

**ENFORCEMENT,
CONFIDENTIAL**

July 29, 1985

**PRIVILEGED WORK PRODUCT PREPARED
IN ANTICIPATION OF LITIGATION**

Mr. Rodney Gaither
Hazardous Waste Enforcement Branch
U.S. EPA Region 5
230 S. Dearborn Street
Chicago, Illinois 60604

Dear Mr. Gaither:

PRC Environmental Management, Inc. (PRC) has reviewed the July 1985 Final Remedial Investigation Report (RI) prepared by Kumar Malhotra & Associates, Inc. (KMA) for the Johns-Manville Disposal Area in Waukegan, Illinois. PRC's comments on the Final RI cover only those sections of the report that relate to potential air emissions from the disposal area. This includes Sections 1 and 5, parts of Sections 3 and 4, Appended Material to Volume I (including Response to Comments on ORF Report 10335 by EPA in their Letter of June 4, 1985 by Dr. E.J. Chatfield, Ontario Research Foundation, 25th June 1985), and Appendices I and K of Volume II. This review focuses on how the Final RI addresses PRC's conclusions and recommendations concerning the March 1985 Draft RI which were submitted to EPA in a previous letter report (April 17, 1985) delivered under this work assignment. The points brought out in the conclusions and recommendations can be summarized as follows:

- o Failure of the Draft RI to consider asbestos in the Endangerment Assessment;
- o Absence of on-site measurements of lead concentrations in air; and
- o Failure of the Draft RI to address several factors likely to have an impact on fugitive air emissions from the disposal area.

The remainder of this letter report discusses how the Final RI has addressed these points.

The Final RI addresses the issue of potential asbestos exposure for the population surrounding the Johns-Manville site and incorporates information on asbestos into the Section 5 Endangerment Assessment. However, PRC questions the presentation of the asbestos material in Section 5 of the Final RI. The majority of fibers detected in the October-November 1984 air monitoring study conducted by Ontario Research Foundation were chrysotile fibers shorter than 5 micrometers. The Endangerment Assessment of the Final RI

appears to minimize the importance of this finding by suggesting that amphibole fibers longer than 5 micrometers pose a much greater hazard to human health:

"Fibers that are shorter than 8.0 micrometers regardless of diameter ... possess little or no capacity to be fibrogenic or carcinogenic." (Page 5-5)

"There is rather strong evidence suggesting that in the circumstances of human exposure, crocidolite and amosite (both amphiboles) have a greater proclivity for causing an adverse biological response than does chrysotile." (Pages 5-10 to 5-11)

Without choosing sides in the scientific debate surrounding asbestos toxicity, PRC questions this presentation for two reasons. First, there is no consensus on the effects of either fiber type or fiber length on asbestos toxicity. A 1984 National Research Council report on Nonoccupational Exposure to Asbestiform Fibers (cited in Zurer, P.S., Chemical & Engineering News 63(9):28, March 4, 1985) concluded that there was no minimum fiber size that could be declared not to have an effect on health. The Occupational Safety and Health Administration believes that "all asbestos fiber types appear to have an equivalent potency for causing lung cancer" (49 Federal Register 14116, April 10, 1984). Second, none of the asbestos studies cited in the Endangerment Assessment are supported by references.

The proposed air sampling program for lead (Appendix K of the Final RI) appears to be adequate for evaluating potential human health and environmental risks. On-site sampling locations have been chosen to evaluate air lead levels near disposal areas at the interior of the site and along the north, south, and east boundaries of the site. Two off-site background locations will also be sampled. The proposed study methods appear to conform to EPA-recommended procedures for measuring lead in suspended particulate matter collected from ambient air.

Some of the factors which could potentially affect fugitive air emissions at the Johns-Manville site which were ignored in the Draft RI have been addressed to a limited extent in the Final RI. Current disposal practices and dust suppression measures are described briefly on pages 3-15 and 3-17. A short description of the waste piles near on-site asbestos sampling locations 1 and 5 is provided on page 4-2. However, the Final RI fails to address the potential effects of climate, specifically the impact of prolonged drought and high winds on air concentrations of asbestos. The June 14, 1984 Consent Order between Johns-Manville and U.S. EPA Region V required that the RI "be conducted in conformance ... with the applicable provisions of 40 C.F.R. 300.68." This section of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) lists climate, including rainfall, as one of the factors to be considered in the RI. PRC agrees that the asbestos air monitoring program was carried out under the guidelines specified in Exhibit 1, Section 4 to the Consent Order: sampling on "days with rain or days following precipitation by less than 24 hours should be avoided." In interpreting these study results, however, the RI should consider the broader guidelines set forth in the NCP. The October-November 1984 air asbestos study was conducted under conditions that "ranged from wet to relatively dry." The results cannot be considered representative of air concentrations during dry summer months when the population around the site

Mr. Rodney Gaither - Page Three

is more likely to be outdoors and, as a result, more likely to be exposed to airborne asbestos from the site.

Please feel free to contact me if you have any questions on the comments presented above. PRC and INTERA will comment on the results of the air lead concentration and ground water inorganic anion studies at your request. Ron Lantz at INTERA and I will await further directions from you before proceeding on this work assignment.

Sincerely,

PRC Environmental Management, Inc.

John Dirgo

John Dirgo
Environmental Scientist

JD/md

cc: Nancy Deck (2 copies)
Marian Bernd

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY):

(Name of person called above)

TO: Rodney L. Gaither,
U.S. EPA

FROM: Marvin Clumpus,
J-m
(303) 978-2000

DATE 8-8-85

TIME 2:00 p.m.

SUBJECT: Johns-Manville Corp.

SUMMARY OF COMMUNICATION

Marvin returned my call and I confirmed the 9-4-85 meeting date that will take place at 10:00 a.m. that morning. I told him Babette Neubeger would like for the meeting to be at the Agency, Marvin agreed.

INCLUSIONS, ACTION TAKEN OR REQUIRED

FORMATION COPIES

**RECORD OF
COMMUNICATION**

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER SPECIFY:

(Record of how checked above)

TO: Rodney S. Gaither,
U.S. EPA

FROM: Marvin Clumpus,
J-M
(303) 978-2000

DATE 8-8-85
TIME 11:00 AM

SUBJECT John-Manville Corp.

SUMMARY OF COMMUNICATION

Marvin returned a call from previous
to set up a meeting between J-M and U.S. EPA.
He set up a meeting for 9-4-85 at 10:00 am at
J-M in Waukegan, Illinois.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Name of person called above)

TO: Kumar Malhotra,
(616) 361-5092

FROM: Rodney G. Gaither,
U.S. EPA

DATE 8-7-85

TIME 11:10 AM

SUBJECT: Johns-Manville

SUMMARY OF COMMUNICATION

I returned Kumar's call to discuss further sampling plans. Kumar asked if I was pleased with the air monitoring practice for lead. I confirmed that statement with an affirmative answer. Kumar suggested U.S. EPA and Johns-Manville have a meeting to discuss an alternative to the asbestos problem. He suggested placing about 2 inches of topsoil over the asbestos area followed by seeding and using a sprinkler system for the area. I told Kumar I had already submitted my comments to Marvin Clumpus. I told Kumar I couldn't make any commitments on whether I would approve the final RI after the test results are submitted in September.

INCLUDES ACTION TAKEN OR REQUIRED

FORMATION COPIES

**RECORD OF
COMMUNICATION**

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of how checked above)

TO: Rick Jonas, J-m
623-2900

FROM: Rodney G. Guether,
U.S. EPA

DATE: 8-6-85

TIME: 7:40 Am

SUBJECT

Johns-Manville Corp.

SUMMARY OF COMMUNICATION

I called Rick to see if the contractors had started sampling. Rick said they had not, I related to Rick the fact that it rained in Chicago and if it had rained in Waukegan last night, he said he didn't think it rained too much if at all there, but the ground was very wet because of the high humidity in Waukegan yesterday. I left my number with Rick and told him to have the contractors get in touch with me anytime during the day they had to.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER SPECIFY:
TO: Rodney G. Gaither, U.S. EPA		FROM: Hugh Huizenga ICF, Inc. (202) 862-7280
		DATE: 8-5-85 TIME: 10:55 am
SUBJECT: Johns - Manville		
SUMMARY OF COMMUNICATION: <p>Hugh called and asked me how many samples were analyzed for the J-M site. He also asked what other results, if any, were in. I told him the following:</p> <ul style="list-style-type: none"> 31 samples from 10 borings & 5 monitoring wells were taken. Along with these samples were, (3) field blanks, (10) surface & near surface samples, (1) near surface replicate. 5 Monitoring wells <ul style="list-style-type: none"> (1) Replicate Sample (1) field blank 5 Runs on 5 different days 5 samples collected at each of 5 locations of landfill & 3 off-site samples during 5 sampling periods. (25) samples on-site (15) " off-site Analyzed by Ontario Research Foundation in Ontario Canada, also by EMS laboratories in Hawthorne, California (2nd Check) 		
CONCLUSIONS, ACTION TAKEN OR REQUIRED:		
INFORMATION COPIES:		

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of how checked above)

TO: Rodney S. Daither,
U.S. EPA

FROM: Ravi Vangipuram
Clayton Envir Services

DATE 8-5-85

TIME 8:40 AM

SUBJECT: Johns-Manville Corp.

SUMMARY OF COMMUNICATION

Ravi called to see when testing could begin. I told him it would have to be 24 hrs. after rain. I gave him the OK to start this evening, as long as it would be 24 hrs. after it stopped raining. I let him know that I would be at the site on Tuesday, August 6, 1985.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Name of non-checked above)	
TO: Rick Jonas, J-M 623-2900	FROM: Rodney G. Gaither, US EPA	DATE: 8-1-85	TIME: 1:05 pm
SUBJECT: Johns - Manville Waukegan Disposal Area			
SUMMARY OF COMMUNICATION			
<p>I called Rick to tell him I had talked to Larry Austin, and give him my consent for the testing to continue. I related to Rick what Larry had told me and also to let Rick know that I wasn't present when the water samples were collected, and to approve of the air sampling that began today (8-1-85). It was orally agreed upon that arrangements could be made to have another collection of water samples to be taken. It was also agreed that the air monitoring would continue or be completed on Monday 8-5-85, with weather permitting.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
<p>FORMATION COPIES</p>			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER SPECIFY:	
		(Record of how checked above)	
TO: Larry Austin, KMA (616) 784-4019	FROM: Rodney B. Gaither, U.S. EPA	DATE: 8-1-85	TIME: 12:55 pm
SUBJECT: <u>Jenkins - Manville Waukegan Disposal Area</u>			
SUMMARY OF COMMUNICATION			
<p>I returned Larry's call and he wanted to state that he and the contractors would sample through the weekend to finish the project. He also stated that the last rainfall in Waukegan was at 9:00 am in Wednesday, 7-31-85. I told Larry I preferred the testing be held on weekdays opposed to the weekends. This was because there would be more people (workers) in the area, and there would be a better handle on the situation regarding the public's welfare. Larry explained he didn't want his people to have to stay over the weekend to start up testing again on Monday (8-5-85). I told Larry the testing should've begun 7-29-85, which was a good day for testing. I added to</p>			
CONCLUSION, ACTION TAKEN OR REQUIRED			
<p>Thursday and Friday (8-1-85 to 8-2-85), the testing would have been completed.</p>			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER SPECIFY: _____		
<small>(Name of person called shown)</small>			
TO Rodney D. Baithen, U.S. EPA	FROM Marvin Cumpus, J-M (Denver Colo.)	DATE 8-1-85	TIME 10:35 Am
SUBJECT John - Manville			
SUMMARY OF COMMUNICATION Marvin called to tell me that the contractors had already started the air monitoring for lead (Pb). We both discussed the fact that since it had been raining within 24 hrs. of that sampling, those test results may have to be thrown away. I told Marvin that if weather permits, Friday (8-2-85), may be regarded as the first day appropriate to sample. Marvin told me that Larry Austin had already collected the water samples. I told Marvin I thought I should've been there when the samples were collected.			
CONCLUSIONS, ACTION TAKEN OR REQUIRED Kumar and I will talk later after he gets back from out of town.			
INFORMATION COPIES D:			

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

TO: Rick Jonas
623-2900

FROM: Rodney D. Butcher
U.S. EPA

DATE: 8-1-85
TIME: 8:50 AM

SUBJECT: Johns - Manville Disposal Area (Waukegan)

SUMMARY OF COMMUNICATION

I called to find out if Larry Austin had collected the water samples as yet. I told Rick I thought I should at least be there for one of the collections if there were going to be more than one collection. Rick said he would try and track down Larry and see what his plans were going to be and have Larry to call me.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES
TO:

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER SPECIFIC:	
		(Record of non-checked above)	
TO: Mike Dehick 623-2900	FROM: Rodney D. Baither, U.S. EPA	DATE: 8-1-85 TIME: 8:25 AM	
SUBJECT: Johns-Manville Waukegan Disposal Area			
SUMMARY OF COMMUNICATION: <p> I called Mike to see if the air testing for lead (Pb) had begun. He said it didn't as yet because it rained within <u>24 hrs</u> of today. Mike told me that a <u>Dean Olmstead</u> of his plant would do the OSC for this project. I would have to contact him about the project activities at the site. Mike did say testing could probably begin Friday 8-2-85, if weather permits. I told Mike that the testing should be finish the following week. He also said Larry Austin, supervisor or overseer of contractors, may have already collected the upper samples. </p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

5HE-12

JUL 31 1985

Mr. Marvin Clumpus
Project Coordinator
Manville Service Corporation
P.O. Box 5108
Denver, Colorado 80217

Re: The Johns-Manville Sales Corporation
Waukegan, Illinois

Dear Mr. Clumpus:

Per our conversation on July 30, 1985, I informed you that I had considered the first air monitoring test for lead (Pb) to be cancelled due to rain. I was informed later from Mike Debish, of the Waukegan plant, that testing would probably begin on Thursday morning, August 1, 1985. As you are probably aware of, the final Remedial Investigation Report (RI) states that the testing should begin on July 29, 1985. The testing for lead (Pb) in the air and the collection of additional water samples should not have to exceed two weeks, with weather permitting, from the start date.

Sincerely yours,

Rodney G. Gaither
Remedial Project Manager

cc: R. Diefenbach
B. Neuberger

RG:clm:WMD:HWEB:CERCLA Enforcement Section:7/31/85

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of non-covered phone)

TO: Dr. Joseph Bees & Cindy
Stroup
FTS 382-3561 & 3891

FROM: Rodney G. Baither
U.S. EPA

DATE: 8-6-85

TIME: 9:40 AM

SUBJECT: Johns-Manville Corp.

SUMMARY OF COMMUNICATION

Cindy Stroup now Dr. Joseph Bees were in the office at the time of my call. Cindy reportedly won't be back until around 8-12-85. I left word that I wanted Cindy to probably contact out to Batelle to evaluate the final and/or draft RI report regarding Johns-Manville in Waukegan, Illinois. This would be in particular favor of the airborne asbestos test. I left word that if Cindy wouldn't be back until 8-12-85, while I'm on vacation, the attorney, Bette Neuberger might contact Cindy. I left my number for Dr. Bees to return my call.

ADDITIONAL ACTION TAKEN OR REQUIRED

FORMATION COPIES

AUG 1 1985

Johns-Manville Waukegan Disposal Area

Rodney G. Gaither
Remedial Project Manager

Babette Neuberger, ORC

Per your letter and recent conversations to me, a typed letter in draft form regarding the above subject matter, was hand-carried to your office on Tuesday, July 30, 1985, for your approval.

Unfortunately, you were not able to respond at that time, nor the next day. It was, and still is, my intent to have my comments in response to the final Remedial Investigation Report in the hands of Johns-Manville's Coordinator by August 3, 1985.

If there are any further changes, please inform me of them.

cc: File

**RECORD OF
COMMUNICATION**

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER SPECIFIC:

(If more than one checked above)

Rodney D. Gaither,
U.S. EPA

FROM: Mike Delish,
J-m Waubesa, Ill.

DATE 7-30-85

TIME 9:00 AM

SUBJECT
Johns - Manville

PART OF COMMUNICATION

Mike returned my call and said that they cancelled the test because it was raining there in Waubesa, Illinois. He said they (J-m) will try and start testing on Thursday morning (8-1-85). Mike said we (Agency & J-m) could play it by ear and I could call him instead of calling the ~~the~~ Denver office.

ADDITIONAL ACTION TAKEN OR REQUIRED

ADDITIONAL COPIES

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Name of person called above)

TO: Marvin Clumpus,
J-M Denver Colo.
(303) 978-2790

FROM: Rodney D. Gaither,
U.S. EPA

DATE: 7-30-85
TIME: 8:20 AM

SUBJECT: Johns-Manville (Air Monitoring for Pb.)

SUMMARY OF COMMUNICATION

I called Marvin to inform him I had called Mike Dehick about cancelling the air monitoring for lead. I told him Mike hadn't returned my call as yet. I also told Marvin that at approximately 4:00 am in Chicago it had been raining. Also, when I called the J-M plant in Waukegan, I was informed that it had started sprinkling there. I told Marvin that I didn't know whether it had rained or not in Waukegan, but that was the reason I was calling Mike Dehick. I told Marvin if a 0.1" ^{of rain} precipitation did not fall in Waukegan I would still go out there. If 0.1 inch of precipitation did fall, I would consider the test cancelled. Marvin gave me the extension number of Rick Jones, Mike's

CONCLUSIONS, ACTION TAKEN OR REQUIRED

supervisor, if I needed to call him. Marvin said he would contact Rick or Mike at the plant in Waukegan.

Rick Jones (312) 623-2900 Ext 269

ADDITIONAL COPIES

0:

**RECORD OF
COMMUNICATION**

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY):

(Name of person checked above)

TO: Mike Delish,
J-M

FROM: Rodney L. Gaither,
U.S. EPA

DATE 7-30-85

TIME 7:40 AM

SUBJECT: Johnis-Manville Corp. (Air Monitoring for Pb)

SUMMARY OF COMMUNICATION

I placed a call into the J-M plant in Waukegan, Illinois to inform Mike that the air monitoring for Pb should be cancelled. Unfortunately Mike wasn't at his desk, so I left my name and phone number for him to get back in touch with me.

INCLUSIONS, ACTION TAKEN OR REQUIRED

FORMATION COPIES

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of how checked above)

TO: Kumar Malhotra, KMA
616 361-5092

FROM: Rodney G. Gaither,
U.S. EPA

DATE 6-27-85

TIME 1:10 pm

SUBJECT: Johns - Manville

SUMMARY OF COMMUNICATION

I approved the fact that Kumar would analyze the water samples that were taken in April, 1985, for further analysis. These will include Chlorides, SO_4^{2-} , Total Alkalinity, Specific Conductance, NO_3^{-2} , and Carbonates. It was agreed upon, if the concentrations seemed to be off, new samples would be taken in conjunction with the time of the Pb air monitoring.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
(Record of how checked above)			
TO: John Dingo, PRC Engineering 938-0300 Ext 292		FROM: Rodney B. Gaither, U.S. EPA	
		DATE: 6-26-85 TIME: 8:40 AM	
SUBJECT: Johns-Manville			

SUMMARY OF COMMUNICATION

John and I discussed the fact that Intera would probably respond to J-M's latest Technical Memorandum on 'Asbestos Analysis of Water Samples by Electron Microscopy'. John said he would contact Ron Lantz of Intera because he thought Intera had more hours left on the project. Ron Lantz's number in Austin, Texas, is (512) 346-2000.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

FORMATION COPIES

3:

**RECORD OF
COMMUNICATION**

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(If more than one checked above)

TO: Rodney G. Gaither,
U.S. EPA

FROM: Mark Miller,
CH2M Hill (414) 276-0300

DATE: 6-24-85
TIME: 1:30 pm

SUBJECT: Johns - Manville

SUMMARY OF COMMUNICATION

Mark called me to let me know that he has to talk to the local people about the site and ask me what was presently happening. I let Mark know that the Agency had requested a variety of things for J-M to do or redo.

INCLUSIONS, ACTION TAKEN OR REQUIRED

FORMATION COPIES

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO: Rodney G. Daiter, U.S. EPA	FROM: Rick Notini, Calif. Dept of Health Services	DATE: 6-18-85	TIME: 3:50 pm
SUBJECT: Johns-Manville Corp.			
SUMMARY OF COMMUNICATION			
<p>Rick called to request a copy of the Agency's response to J-M's Draft RI report. I told him I would send him a copy.</p> <p>Calif. Dept. of Health Services Toxic Substances Control Division 107 So. Broadway Rm 7011 LA, Calif. 90012</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES D:			



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

230 SOUTH DEARBORN ST.

CHICAGO, ILLINOIS 60604

MAY 6 1985

REPLY TO THE ATTENTION OF:

MEMORANDUM

SUBJECT: Comments on Remedial Investigation Report of Johns-Manville Sales Corporation

FROM: Babette J. Neuberger *BJN 5/6/85*
Assistant Regional Counsel

TO: Rodney Gaither, Remedial Project Manager

I have reviewed the comments on Johns-Manville's Remedial Investigation Report that were submitted to the Agency by Intera Technologies, Inc. and Planning Research Corporation (PRC). The comments were reviewed to determine a) deficiencies in the company's report; b) need for additional study; c) the EPA contractors' understanding of the scope of agreement between EPA and Johns-Manville; and d) strategy for further negotiations and/or litigation.

To place my comments in proper perspective let me underscore the operable provisions of the agreement reached with Johns-Manville. First, Johns-Manville committed to undertake a Remedial Investigation and Feasibility Study at its Waukegan facility, and to submit a completed Remedial Investigation report by February 5, 1985. By letter dated February 8, 1985, Valdas Adamkus extended the deadline for submitting the RI report as follows: a draft RI report was to be submitted by March 4, 1985. A final RI report, incorporating comments submitted on the draft report, is to be submitted two weeks after receipt of comments on the draft report. Pursuant to paragraph VI of the Consent Agreement, Johns-Manville is liable for stipulated penalties in the amount of up to \$2000.00 per week, for failure to submit a timely RI report. Under paragraph VI.E, Johns-Manville may be liable for the full amount of statutory penalties for other violations of the Agreement. In addition, pursuant to paragraph IV.a3.e., of the Agreement, Johns-Manville may be required to do additional studies as determined to be necessary, following completion of the work plan contained in Exhibits 1 and 2 of the Agreement.

The comments on the RI report that we submit to Johns-Manville must distinguish between deficiencies in the draft RI report which must be corrected within two weeks, and deficiencies in the sampling program that require additional study pursuant to paragraph

IV.a.3.e., of the Agreement. It is important that we develop a clear record of the company's responsibilities and the relevant provisions of the Consent Agreement. This will help in the event negotiations break down and referral for litigation becomes necessary. In addition, note that pursuant to paragraph V.C. we have thirty days to review the final RI report; and that if we disapprove the report we must specify what further work needs to be done, why it must be done and a proposed schedule therefore.

With respect to the comments of Planning Research Corporation, I have tentatively determined that the following comments should be reflected as deficiencies in the draft report (to be corrected within two weeks):

1. Interpretation of asbestos monitoring study results (p.1-3);
2. Air monitoring study objectives (p.3)
3. Conditions during sampling period (p.3-4)
4. On-site sources and control activities (p.4-5)
5. Contamination of blanks (p.5)
6. Non-uniformity of asbestos fiber deposits in filters (p.5-6)

I recognize that several of these deficiencies may require additional sampling to correct (eg. failure to collect background samples at least 5km from the site (p.3) and failure to conduct additional blank analysis in the event of contamination, discrepancies or inconsistencies (p.5)). Nevertheless, these represent problems with the initial sampling program, and the company's failure to comply with the terms of the Work Plan. For this reason, the company should not be given greater than two weeks to "cure the defects," without incurring the risk of statutory penalties and/or the threat of litigation for failure to comply with the Consent Agreement.

If these problems are not corrected in the final report, the report should be rejected pursuant to the terms of paragraph V.C.

The initial sampling program revealed the need for additional study of the lead "problem" pursuant to paragraph IV.a.3.e., of the Consent Agreement. Therefore, the comments of Planning Research Corporation relating to On-site Lead Concentrations in Air should be characterized as "the need for additional study" beyond the two week due date for the final RI report.

In addition, while PRC's comments do not explicitly indicate the need for additional air monitoring under "conditions which would result in the maximum potential contaminant generation and off-site migration" the RPM and the CERCLA Enforcement Section may determine that additional study is necessary especially in light of the deficiencies pointed out in the initial report and the "discovery" of an apparent "new" source of asbestos exposure on-site, ie. the waste piles.

The comments submitted by Intera Technologies, Inc. raise several questions. Initially I question whether complete anion analyses was required in the Work Plan. If not, why should we require it now?

Second, Intera reaches several assumptions in its report, the basis for which are not clear to me. Intera relies on these assumptions to conclude that additional study to determine the probable ground-water movement is necessary. Specifically, Intera states:

1. It believes the water level data for September 27, 1984, is the most representative for the site.
(p.2)
2. The temperature contours shown on Fig. 4-5 of the RI report are undoubtedly more a result of conduction rather than convection with the ground-water flow
(p.2), and
3. A ground-water mound underlies the entire JM waste disposal area.

I would like to have a better understanding of the basis for these assumptions before we submit these comments to Johns-Manville. In addition, I question whether it would not be better to present Intera's assumptions as "possibilities" raised by the data which require additional study, rather than as stated assumptions about the data which must be confirmed. The latter approach leaves us open for greater attack.

Intera's comment concerning Potential Pathway for Lead Transported off-site (pp.4-5) should be presented as a deficiency in the draft RI report to be corrected for the final report.

Let's discuss these comments and our strategy at your earliest convenience. By allowing private parties to conduct Remedial Investigations and Feasibility Studies the Agency has presented

companies with a great opportunity to subvert the RI/FS process. I believe the results of Johns-Manville's efforts indicate a "worst case" example of what can go wrong when a PRP is allowed to conduct an RI/FS. Because of the shoddy work performed by Johns-Manville and its contractor, it is incumbent on us to work closely together to ensure that quick and effective enforcement is brought to bear against the company if the noted deficiencies are not corrected in a very timely fashion.

cc: Diefenbach/Niedergang/Miner/Stringham
Magel/Gade/Ullrich/Schaefer

Manville Service Corporation
Ken-Caryl Ranch POB 5108
Denver, Colorado 80217
303 978-2000

Manville

CERTIFIED MAIL, RETURN RECEIPT REQUESTED

September 7, 1984

Basil G. Constantelos
Director, Waste Management Division
U. S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, IL 60604

RECEIVED
SEP 10 1984

**WASTE MANAGEMENT
BRANCH**

Re: Johns-Manville Waukegan Disposal Area RI/FS

Dear Mr. Constantelos:

In accordance with Article XIII.A. of the Administrative Order by Consent (the "Consent Order") entered into between Johns-Manville Sales Corporation and the U. S. Environmental Protection Agency, I have forwarded to the USEPA, Region V, Regional Hearing Clerk on this date a check in the amount of \$43,735.00 payable to the order of the Hazardous Substances Response Trust Fund. For your files, I have enclosed a copy of the check and accompanying cover letter.

Further, in accordance with Article V.B. of the Consent Order, I am hereby submitting the first monthly progress report describing the efforts of Johns-Manville towards implementing the terms of the Consent Order. If you have any questions or comments concerning the form or content of the report, please let me know.

Very truly yours,



K. (Chet) Nerheim,
Manager, Assets Recovery and
Project Coordinator

KN/
Enclosures

PROGRESS REPORT NO. 1

Date: September 7, 1984

**IMPLEMENTATION OF ADMINISTRATIVE
ORDER BY CONSENT**

**JOHNS-MANVILLE SALES CORPORATION
WAUKEGAN FACILITY DISPOSAL AREA**

WAUKEGAN, ILLINOIS

I. General

- A. On July 16, 1984, Johns-Manville petitioned the United States Bankruptcy Court for approval to enter into the Consent Order; on August 9, 1984, the Court entered such an order.
- B. Per Article V.B. of the Consent Order, this first monthly progress report is being submitted; subsequent progress reports will be submitted on or before the tenth day of each month until the Consent Order is fully implemented.

II. Work Undertaken/Completed

- A. Installation of warning signs per Article IV.A.1. of the Consent Order
- B. Completion of water balance study and report per Article IV.A.2. of the Consent Order
- C. Designation of Project Coordinator and Alternate Project Coordinators per Article VIII. of the Consent Order
- D. Preparation of draft Work Plan for Geotechnical and Hydrological Investigation
- E. Requests for bids to perform air monitoring study sent to candidate consultants
- F. Payment of response costs per Article XIII.A. of the Consent Order (payment sent via certified mail on September 7, 1984)

III. Work Scheduled

- A. Field work for Geotechnical and Hydrological Investigation to begin week of 9/9 (2-3 weeks estimated for completion)
- B. Bids for air monitoring study to be reviewed and consultant to be selected
- C. Submittal of final Work Plan for Geotechnical and Hydrological Investigation

IV. Remarks

- A. Draft Work Plan for Geotechnical and Hydrological Investigation reviewed with USEPA and IEPA on August 22, 1984; plan verbally approved, subject to minor revisions agreed to at meeting.
- B. Johns-Manville has not received USEPA's designation of its Project Coordinator per Article VIII. of the Consent Order and, until otherwise notified, will continue to direct all communications to Director, Waste Management Division, USEPA, Region V.
- C. On or about August 21, 1984, Johns-Manville requested USEPA's approval of certain work completed per Article V.C.1. of the Consent Order and is looking forward to such approval.



K. (Chet) Nerheim,
Project Coordinator

K. (Chet) Nerheim, Manager
 Assets Recovery and Project Coordinator
 Manville Service Corporation
 P.O. Box 5100
 Denver, Colorado 80217

Dear Mr. Nerheim:

This letter is to inform you that I approve the Work-Plan for Geochemical and Hydrogeological Investigations produced by KMA, Incorporated, including the January, 1984, CAL, Incorporated, Quality Assurance Manual with the October 4, 1984, Supplement. The one condition to this approval is that the Remedial Investigation Report is to contain, in an appendix, the raw data from the sample analysis runs from chromium, cadmium, selenium, and sulfide. Include there also the GC/MS outputs for a sample containing detectable contamination. In the event no detections were ever made, substitute an example no-detect run.

Johns-Manville Sales Corporation has now completed Section 1.2.1 of Exhibit 2 of the consent order between Johns-Manville Sales Corporation and U.S. EPA. I appreciate your efforts toward our goal.

Sincerely yours,

William D. Mains
 Remedial Site Project Manager

cc: KMA, Inc
 Babette Newberger SC

bcc: James Whipple J-M
 Robert Cowles IEPA
 Chris Grundler OMPE
 Rodney Gaither RRSII ✓

SHR-13:WMains:aj:11-09-84:Disk#2

K. (Chet) Herheim, Manager
Assets Recovery and Project Coordinator
Manville Service Corporation
P.O. Box 5108
Denver, Colorado 80217

Dear Mr. Herheim:

This letter is to inform you that I approve the Work-Plan for Geotechnical and Hydrogeological Investigations produced by KMA, Incorporated, including the January, 1984, CAL, Incorporated, Quality Assurance Manual with the October 4, 1984, Supplement. The one condition to this approval is that the Remedial Investigation Report is to contain, in an appendix, the raw data from the sample analysis runs for chromium, cadmium, selenium, and sulfide. Include there also the GC/MS outputs for a sample containing detectable contamination. In the event no detections were ever made, substitute an example no-detect run.

Johns-Manville Sales Corporation has now completed Section 1.2.1 of Exhibit 2 of the consent order between Johns-Manville Sales Corporation and U.S. EPA. I appreciate your efforts toward our goal.

Sincerely yours,

William B. Mains
Remedial Site Project Manager

cc: KMA, Inc
Babette Newberger SC

bcc: James Whipple J-M
Robert Cowles IEPA
Chris Grundler OMPE
Rodney Gaither RRSII

5HR-13:WMains:aj:11-09-84:Disk#2

WDM
11/14/84



• ENGINEERS • CONSULTANTS • PLANNERS •

KUMAR MALHOTRA & ASSOCIATES, INC.

3000 East Belt Line N.E.
Grand Rapids, Michigan 49505
Telephone (616) 361-5092

October 12, 1984

William D. Mains
On-Scene Coordinator
U.S.E.P.A., Region 5
230 South Dearborn Street
Chicago, Illinois 60604

Reference: Waste Disposal Site
Johns-Manville, Waukegan, Illinois

Dear Mr. Mains:

First of all I must thank you for your assistance to KMA's staff during the field investigations. This letter is in response to your review/comments on the draft work plan for field investigations at the above referenced site. This response covers comments made in the August 22, 1984 work plan review meeting at Waukegan, Illinois as well as those addressed in your September 1984 letter to James H. Whipple of Manville Service Corporation.

Responses to all of the comments and suggestions made during the August 22, 1984 meeting have been incorporated in the work plan and copies of the revised work plan are enclosed for your review and approval. As you are aware from your site inspections that various procedures and precautions listed in the work plan were followed during field investigations.

A summary of procedures actually used in the field will be presented in the Investigations Report.

A response to your comments in September 1984 letter is presented in the enclosed supplement to the Quality Assurance Manual submitted to you during the August 22, 1984 meeting. This supplement addresses each of the sections outlined in your September, 1984 letter except section 5.10. Data reduction methods will be discussed in the Remedial Investigation (RI) Report as specified in the work plan. Methods to identify and treat outliers is presented in Section 7 of the Canton Laboratory Quality Assurance Manual. However a brief summary of methods used will be included in the RI Report.

Please feel free to contact me if you have any questions on the enclosed information.

Sincerely yours,

S.K. Malhotra, Ph.D., P.E.
Project Manager

Enclosure
cc: J.H. Whipple
SKM:cw

21 SEP 1984

R. (Chet) Berheim
Manville Service Corporation
P.O. Box 5108
Denver, Colorado 80217

Dear Mr. Berheim:

In keeping with the requirements of Article VIII of the Administrative Order by Consent signed between U.S. EPA and Johns-Manville Service Corporation on June 19, 1984, I have been designated the EPA Project Coordinator. An Alternate Project Coordinator, Rodney Gaither, has also been designated.

In response to your inquiry concerning two work items, EPA is in receipt of the Water Balance Study and acknowledges that warning signs have been posted per the Order. As the adequacy of the Water Balance Study is best judged when the work currently underway is completed, I wish to confine my action to noting its receipt. The Water Balance Study notes some limitations of its investigation which may, or may not, affect future considerations. As a result, I feel it would be cheaper and more direct for us to discuss what other, or more detailed, investigation will be required, if any, at such time that the Water Balance Study and Draft Remedial Investigation can be evaluated together.

While it is true that those portions of the Draft Work Plan (hydrogen) which were available at our August 22, 1984, meeting were verbally approved with modifications, I wish to draw your attention to a major consideration. EPA has allowed work to proceed based on the acceptable portions of the draft work plan. However, as work proceeds samples are taken and holding times may be exceeded before draft work plan portions covering sample analysis are received or approved. This can result in samples which are too old to analyze, or samples which were analyzed by unacceptable methods. Either condition would require resampling. I sincerely hope that the remaining portions of the draft work plan are received in a readily acceptable form soon.

Sincerely yours,

William D. Mains
Remedial Site Project Manager

cc: R. Seuberg, DC
Robert Carlisle, LRP

9/21/84
WDM
RRS II

WINS:REMEDIAL RESPONSE BRANCH:9/18/84:ddv diskette #5

Manville Service Corporation
Ken-Caryl Ranch POB 5108
Denver, Colorado 80217
303 978-2000

Manville

September 7, 1984

CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Regional Hearing Clerk
U. S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, IL 60604

Dear Sir/Madam:

Johns-Manville Sales Corporation ("Johns-Manville") and the U. S. Environmental Protection Agency ("USEPA") recently entered into an Administrative Order by Consent (the "Consent Order") concerning the Johns-Manville Waukegan Facility Disposal Area. As part of the Consent Order, Johns-Manville agreed to pay to USEPA the sum of \$43,735.00 as reimbursement of response costs incurred by USEPA from August 26, 1982 through March 1, 1984.

In accordance with the terms of Article XIII.A. of the Consent Order, I am forwarding to your attention the enclosed check payable to the order of the Hazardous Substances Response Trust Fund. If you have any questions, please call me at your convenience.

Very truly yours,



K (Chet) Nerheim
Manager, Assets Recovery and
Project Coordinator

KN/
Enclosure

Manville

566776

JOHNS-MANVILLE SALES CORPORATION.

Pay exactly *****43,735Dollars 00Cents

Date Amount
09 07 84 *****43,735.00

Pay to the order of HAZARDOUS SUBSTANCES RESPONSE
TRUST FUND XUSEPA REG V
230 SO DEARBORN ST
CHICAGO IL 60604

To: RepublicBank Brownwood—Brownwood, Texas
An Affiliate of RepublicBank Dallas

Denver

⑈0566776⑈ ⑆111901551⑆ 484⑈030⑈5⑈

James H. Whipple, P.E.
 Senior Staff Engineer
 Manville Service Corporation
 Ken-Caryl Ranch
 Denver, Colorado 80217

Dear Mr. Whipple:

This letter is a review of the KMA Inc. work plan, as amended at our August 22, 1984, meeting, with respect to quality assurance requirements. For the purpose of this review I have taken both the KMA work plan and the chosen subcontract laboratory's (CAL) quality assurance manual together to evaluate satisfaction of the Plan Content Requirements section (Section 5) of the Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans previously transmitted on July 12, 1984. The pertinent subsections are listed below:

<u>Section</u>	<u>Comment</u>
5.4	Project Organization and Responsibility: The line of authority is shown for non-laboratory activities, but there is none for the laboratory. The organization and line authority within the laboratory showing key individuals responsible for ensuring routine assessment of data for precision and accuracy must be shown.
5.5	Quality Assurance Objectives: The CAL manual contains some QA information, however delineation of experimental conditions, precision, accuracy and completeness is lacking. Enclosures 1 and 2 show two examples of how this may be done by media to reflect the experience and performance of the laboratory. This is a very important part of a QAPP which arises again in 5.14 and 5.15.
5.7	Sample Custody: The origin and control of preservatives to be used in the field is not specified.
5.8	Calibration Procedures and Frequency: The CAL manual does not list each calibration standard used, its origin, and procedures to document the custody history of each (traceability).
5.9	Analytical Procedures: Methods are defined by reference, however the methods for chromium and lead are not sufficiently sensitive. For

cadmium and lead, the detection limit is at the drinking water maximum contaminant level. The chromium method is at 40%. Methods must be selected which provide detection limits consistently at or below 25% of the maximum contaminant level, preferably 10%.

5.10

→ Data Reduction: Data reduction methods are not discussed in either document. However, it is acceptable to document them in the RI report as specified in the work plan.

→ Methods used to identify and treat outliers are not contained in either document. These methods must be included in the laboratory related portions of the documents.

5.14, 15

Slightly discussed in CAL

Procedures to assess data acceptability and corrective actions: Neither the work plan or the CAL manual address these topics. An example of how these were dealt with in another QAPP is enclosed (Enclosure 3). A treatment such as Enclosure 3 is required to back up the objectives in subsection 5.5.

Throughout this review I have avoided comment on those items or areas I feel not applicable to our project. In those instances where I felt the requirements of the Guidance were primarily directed at safeguarding Federal money spent on a project (to avoid having to do the work again) rather than assuring defensible data, I left much to the professional discretion of Hanville, KMA Inc., and CAL. The information submitted to date satisfies many of the QAPP requirements and should be considered an excellent foundation on which to add the items described above.

Sincerely yours,

William D Gains
On-Scene Coordinator

cc: KMA Incorporated
Bahette Neuberger, SC
Robert Cowles, IEPA

bcc: Christopher Grundler, OWPE
David Payne, SSOA

WD:svc:Remedial Response Section II:9-5-84

9/6/84
RPS
[Signature]

Table 1

EXAMPLE OF FORMAT TO SUMMARIZE PRECISION, ACCURACY AND COMPLETENESS OBJECTIVES

Measurement Parameter (Method)	Reference	Experimental Conditions	Precision, Std. Dev.	Accuracy	Completeness
• NO ₂ (Chemiluminescent)	EPA 650/4-75-011 February 1975	Atmospheric samples spiked with NO ₂ as needed	<±10%	±5%	90%
• SO ₂ (24 hr) (Pararosaniline)	EPA 650/4-74-027 December 1973	Synthetic atmosphere	<±20%	±15%	90%
•	•	•	•	•	•
•	•	•	•	•	•
•	•	•	•	•	•

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ENCLOSURE 1

From: Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans

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5.0 Quality Assurance Objectives .

Media	Parameter	Method	Precision	Accuracy	Completeness %
Soil	As, Se, Sb, Sn (Champaign Lab)	1 manual digestion followed by Automated Hydride generation	<u>+20%</u>	<u>+10%</u>	95%
	Ba, Be, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Ni, Ag, Zn, Al (Champaign Lab)	2 Manual digestion (I36.13II) followed by Atomic Absorption Direct Aspiration methods 38.1, 39.1, 40.1, 42.1, 44.1 45.1 46.1, 48.1, 49.1, 50.1, 53.1, 55.1, 57.1	<u>+20%</u>	<u>+10%</u>	95%
	Tl (Champaign Lab)	2 Manual digestion (I36.13 II) followed by 1 Atomic Absorption method.			
	Co, V, (Champaign Lab)	2 Autoclave digestion (I36.12A) followed by Atomic Absorption ³ methods 303A, 303C and 303A	<u>+20%</u>	<u>+10%</u>	95%
	CN (Champaign Lab)	1 CN in bottom sediment	<u>+20%</u>	<u>+20%</u>	95%
	Sulfide (Champaign Lab)	1 Methylene Blue Photometric Method	<u>+20%</u>	<u>+20%</u>	95%
	PCBs	1 Semimicro Extraction followed by 2 GC Method	A	A	95%
	Semi-Volatiles	4 or 5 and 9	A	A	95%
Ground water	As, Se, Sb, Sn	1 manual digestion followed by Automated Hydride generation	<u>+20%</u>	<u>+10%</u>	95%

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A blank will be analyzed with each set of soil samples. Individual Aroclors should not be detected at concentrations exceeding 0.1 PPM (based on a one gram sample).

DETECTION LIMIT:

0.2 PPM in soil (based on a one gram air-dried sample) Individual Aroclors. Detection limits may be appreciably higher than 0.2 PPM when large concentrations of other Aroclors are present. Detection limits greater than 0.2 PPM are proper when the heterogenous nature of a sample precludes obtaining a representative aliquot.

REPRESENTITIVENESS:

A representative aliquot of the sample is obtained by air-drying, powdering, seiving and mixing the entire soil sample from the 6 oz. sample bottle. Notatun will be made for any sample of such heterogeneous nature the precludes Q.A. objectives being met.

Organic Analysis for Volatile and Semivolatile Compounds.

Analysis for volatile organics and semi-volatile organic compounds will be performed using the following IEPA methods.

- a. GC/MS Method for Volatile Organics Analysis Purge/Trap Procedure. (Equivalent to USEPA Method 624 or 8240).
- b. GC/MS Method for Semi-Volatile Organic Analysis (Equivalent to USEPA Method 625 or 8250).

Accuracy

- a. Tuning of the mass spectrometer twice per day shall meet criteria specified by method listed above for BFB and DFTPP.
- b. Calibration standards are used to audit accuracy of GC/MS calibration. BFB is placed in every interval standard for volatile organic analysis, and DFTPP is placed in the semivolatile interval standard. Calibration standard specifications should be within the limits stated in the method.
- c. Internal Standard
 1. Internal standard for the volatile compound analysis contains all of the following:

:

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D₄-1,2-Dichloroethane
D₆-Benzene
D₈-Toluene
D₁₀-Ethylbenzene
4-Bromofluorobenzene

2. Internal standards for the Semivolatile (Base/Neutral Extractables) compound analysis contains all of the following:

D₈-Toluene
D₅-Nitrobenzene
D₈-Naphtholene
DFTPP
D₁₀-Phenanthrene

Internal standards for the Semivolatile extractable compound analysis contains all of the following:

D₃-Phenol
D₅-Nitrobenzene

The internal standard instrument response shall not vary more than + 20 percent from the beginning until the end of the days analyses.

d. Surrogate Standards

Surrogate standard for the volatile compound analysis contains all of the following compounds:

1,2-Dichloropropane
Fluorobenzene
3-Bromobenzotrifluoride

Surrogate standard for the semivolatile Base/Neutral extractable compound analysis contains the following compound:

Pentafluorophenol

Each sample aliquot of soil or other non-aqueous material will be spiked with approximately 500 ng of the appropriate semi-volatile surrogates. After extraction and concentration the final extract will be approximately 50 ng/ul when analyzed by GC/MS.

Each sample aliquot of soil or other non aqueous material will be spiked with approximately 50 ug of the volatile surrogates. After extraction and dilution in 5 ml of water, the concentration of the water will be 50 ug/l (PPM).

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Stock standards for PCBs are prepared at least every six months.

Stock standards for volatile and semi volatile organics are prepared every month and kept in the freezer.

GROUNDWATER

A. PCB's

1. Accuracy

- a. Aroclor standards used for calibration.....same as before for soil and nonaqueous sample.
- b. For the determination of PCBs in groundwater one sample spike for each Aroclor will be performed with each set of groundwaters to be analyzed. Spike recoveries should be between 70 ml 120% recovery. Resulting spike recoveries will be reported on the QA summary for RI/FS.

Blanks will be determined with each set of groundwater analyses. Aroclors shall not be detected at concentrations exceeding 0.1 ug/l.

2. Precision

A duplicate analysis will be performed with every 10 samples. This shall follow normal quality control protocol for water analysis.

3. Detection Limit

0.1 ug/l (ppb) in water for undeveloped Aroclors based on a one liter sample. The presence of high concentrations of one Aroclor may make the detection limits considerably higher for other Aroclor.

B. Volatile

Same as soils. Detection limit in water is 5 ug/l.

Duplicate trip blanks are to be collected for volatile, with each set of groundwater sampled.

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C. Semivolatiles

Same as soil. Detection limit 10-25 ug/l for most compounds.

WASTE

A. PCBs

1. Accuracy

Same as PCBs in soil. Detection limit 10 - 100 ppm.

B. Volatile

Same as soil. Detection limit 10 to 100 ppm.

C. Semivolatiles.

Same as soil. Detection limit 10 to 100 ppm.

RESIDUE

A. PCBs

Same as soil.

B. Semivolatile

Refer to soils.

GENERAL QUALITY CONTROL FOR GROUNDWATER SAMPLES:

Working Standards:

Working standards are prepared weekly and compared with those of previous week to assure there is no deviation. Known standards (USEPA) are also run at the same time to guarantee the accuracy of the new standards.

Spiked Samples:

Standard spiking solutions are prepared in acetone for PCBs and volatiles. Standards made from the same stock solutions are made up at the same time and used to evaluate spikes. Spike is run with every set or every 10 sample whichever is smaller. Spikes are used to discover long term trends in methods and also to find discrepancies in a given set. Recoveries are calculated as follows:

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$$\frac{\text{Peak Height Spike}}{\text{Peak Height Standard}} = \% \text{ Recovery}$$

A chart is maintained for each compound. The average % Recovery and standard deviation (std. dev.) are calculated and control charts are prepared showing upper and lower control limits represent +2 std. dev. (See Figure ____). Spikes which fall outside this range should be repeated along with blank and a random sample from the set in question. If the repeated sample duplicates its original value and the repeated spike is in control, the original spike is thrown out as indeterminant error. If the repeated sample does not duplicate its original value and/or if the repeated spike is still out of control limits the entire set must be repeated.

Average percent recovery and standard deviations are calculated every three months to reflect the accurate spread of data.

Replicates:

One duplicate is run with every set or every 20th sample whichever is smaller. For soil samples, every 10th sample is duplicated. Duplicate spikes and duplicate samples are used to generate precision data. Precision is calculated by the Shewhart method. Precision charts are maintained for each compound spiked.

Blanks:

Blanks are run with every set or every 20th sample whichever is smaller. For soil samples, every 10th sample is a blank sample. The blank values are not formally documented but chromatograms of the blank for each set is available to report that the blank was free of interferences.

Quality Control Samples:

Known quality control samples are run every three months. Values must be within 2 standard deviations. For volatile organics these quarterly check samples are run beginning of each week.

Surrogate Samples:

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Calibration Standards:

Calibration standards are prepared from the stock solutions same as the working standards. Each calibration curve is composed of a blank and six standards.

Champaign Laboratory

See 'IEPA Quality Assurance Manual' September, 1981, Revised February 1984 Champaign Section Page 51 through 97 for detail quality assurance procedure. In addition to all that following steps will also be implemented for this project:

Soil Samples

1. 2 samples will be spiked prior to digestion or distillation.
2. 2 Samples will be run in duplicates.

Chicago Laboratory:

OBJECTIVES

Quality control programs have two important aspects. First, it is a process of testing and statistical data analysis, to determine the actual properties and "goodness" of an analytical method. Second, it is a monitoring process of control and correction to assure quality results.

Quality control is useful as a tool for the analyst to evaluate, correct, and improve technique. It provides guidelines for accepting and rejecting data, and generates confidence in analytical results.

PRECISION AND ACCURACY

Quality is measured in terms of both precision and accuracy. Precision refers to reproducibility of replicate observations of the sample. Accuracy refers to the degree of difference between the observed value and the known or "true" value. A method may have high precision but may be inaccurate because of poor standards, inaccurate dilutions, improper calibration, or poor recovery. On the other hand, a method may be accurate but lack precision because of low instrument sensitivity, variable rate of biological activity or other factors. Examples are illustrated in Figure 1.

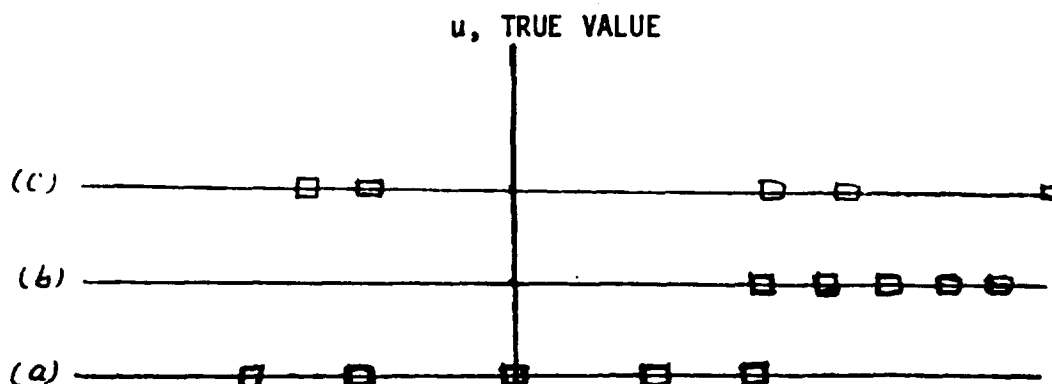


Figure 1 Methods with (a) High Precision and High Accuracy (b) High Precision and Low Accuracy (c) Low Precision and Low Accuracy. Synthetic reference samples or other stable reference samples of known or unknown concentration are useful as either check or control samples to indicate whether instrumental and chemical processes are in control. These samples should have statistical control limits established on their values to indicate when a process is "out of control" and data is, therefore, unacceptable.

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Precision and Accuracy Statements

For most of the parameters there is some type of Quality Control reference sample analyzed. The results of these samples are compiled monthly, reviewed and filed in their individual parameter binders. From these files, the data was obtained to determine precision and accuracy statements. If available, 20 data points (N) were taken from a run. The

mean (\bar{x}), standard deviation (σ^2), relative standard deviation (RSD), and % Recovery were determined for each parameter.

Precision Statement

Precision is defined as the reproducibility of results when replicate measurements are made on a homogeneous sample under "normal" laboratory conditions, and by using the same technique, reagents and instruments, preferably by the same analyst or group of analysts working in a relatively narrow concentration range. Results are expressed in terms of deviation from the mean value of the replicates, the spread or range of the data set, relative precision standard deviation, and variance.

The constituent of interest should be measured on 5 to 10 similar portions of a sample, carefully following the specified method.

To illustrate, 10 alkalinity measurements are given in Table #1. The arithmetic mean, deviation of each individual measurement from the mean, and the square of deviations from the mean are included in the table.

Standard deviation(s) is calculated from the expression:

$$S = \frac{\sum (x_i - \bar{x})^2}{n-1}$$

Variance is defined as S^2 , or:

$$S^2 = \frac{\sum (x_i - \bar{x})^2}{n-1}$$

For the example in (Table 1), $S = 2.17$, and $S^2 = 4.71$.

A similar set of data should be acquired for a sample containing a different level (concentration) of the parameter of interest. Precision

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can, and often does, vary as a function of concentration. Relative precision at the high and low values of the normal range of the parameter can be determined from S/\bar{x} .

TABLE 3. Calculation of Precision of Analytical Method

Analysis No.	Alkalinity (mg/L CaCO_3) x	Individual Deviation from the mean $(x_i - \bar{x})$	Deviation $(x_i - \bar{x})^2$
1.	153	0.4	0.16
2.	151	3.4	5.76
3.	155	1.6	2.56
4.	154	0.6	0.36
5.	154	0.6	0.36
6.	153	0.4	0.16
7.	156	2.6	6.76
8.	153	0.4	0.16
9.	149	4.4	19.36
10.	156	2.6	6.76
Mean (\bar{x}) = 153.4		Sum (Σ) = 42.40	

True Value = 153.0

$N = 10$

$\bar{x} = 153.4$

$S = 2.17$

RSD = 1.4%

% Recovery = 100.3

"Accuracy" is defined as the agreement of a measurement to an accepted value. The difference between the accepted and observed values is the error of the measurement. Errors are commonly classed as absolute and relative.

Relative error is reported typically as percentage, or in parts per thousand, and is based on a ratio of the absolute error to the mean.

STATISTICS

Commonly used statistics in this quality control program are:

1. m - the true value

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2. s - the true standard deviation
3. n - the number of observations or samples
4. x_i - an individual observation or value
5. \bar{X} - the sample mean or average defined by

$$\bar{X} = \frac{\sum x_i}{n}$$

As the number of observations, n , approaches infinity, \bar{X} approaches the true value m for a normal distribution. Thus the mean is a measure of the true value or accuracy.

6. S - the sample standard deviation defined by

$$S = \frac{\sum (x_i - \bar{x})^2}{n - 1}$$

As the number of observations, n , approaches infinity, S approaches the true value, s . This is a measure of the dispersion or scatter of a quantity about its mean. It is used as an indication of precision. The larger the value of S , the larger the degree of scatter and the less the degree of precision.

7. V - the relative standard deviation generally expressed as a percent.

$$V = \frac{100 S}{\bar{x}}$$

This measure normalizes the standard deviation with respect to the mean.

8. % Yield - also referred to as % recovery, is the mean of the known sample or spike recovered from the analysis divided by the known amount expressed as a percent.

$$\% \text{ Yield} = \frac{100 \bar{x}}{x}$$

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Where \bar{X} = mean observed value

X^1 = accepted value

% yield is used as an indication of accuracy.

9. Variance - the sum of the squares of the deviation of the values from their mean divided by the total number of data values (n) minus 1

The definition of the variance can be expressed by the following formula:

$$S^2 = \frac{\sum (X - \bar{X})^2}{n-1}$$

CONTROL CHARTS

GENERAL OBJECTIVES

1. To obtain initial estimates for the key parameters, particularly means and standard deviations.

These are used to compute the central lines and the control lines for the control charts.

2. To ascertain when these parameters have undergone a radical change, either for worse or for better. In the former case, a modification in the central process is indicated.
3. To determine when to look for assignable causes of unusual variations so as to take the necessary steps to correct them or alternately to establish when the process should be left alone.

PRECISION

1. A set of calibration standards is run in the beginning of an automated analytical run and a real sample is then analyzed every 10th sample and a standard at least every 20th sample from the initial set of calibration standards.
 - a. An outside reference, where available, is tested a minimum of (3) times throughout the analytical run (beginning, middle, and end). This reference has a "true value" and is used to set the

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limits of a particular test based on data obtained by testing this reference over a minimum of 3 months.

- b. The relative standard deviation (RSD) obtained on the reference sample is used to monitor the precision and is the basis on which limits for precision are set.

2. Initial limits are established by:

- a. Reviewing historical data on each parameter and establishing the capabilities of the instrument in regard to detection limits.
- b. Running a new reference several times during a one month period. Results higher and lower than the true value are observed and limits are established.

Limit - True Value x RSD expressed as a %.

3. Quality control charts are maintained for all the chemical tests performed in the laboratory on a routine basis. The mean, standard deviation, relative standard deviation and the percent yield in the case of known references are calculated and placed on the quality control sheets.
4. The quality control data sheets are submitted to the Laboratory Control Officer for review on a monthly basis. If an analyst is experiencing difficulties with a particular test, the analyst is instructed to notify the supervisor before test results are reported from the laboratory.

ACCURACY

1. Accuracy is measured on each chart run by the use of known reference standards. USEPA reference samples (type K) are used to verify this accuracy.
2. A known outside reference sample type K should be tested a minimum of three times throughout the chart run.
 - a. The mean, standard deviation, relative standard deviation and the % yield are calculated and placed on the quality control sheets.

The mean is calculated and compared to the true value of the known by calculating the % variance (or % error)

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$$\% \text{ Variance} = 100 \frac{(\text{true value} - \text{observed value})}{\text{true value}}$$

3. Zero concentrations standards are prepared and analyzed within a test run for those tests requiring the addition of a preservative to the sample. The results are placed in the parameter log book.
4. Digestion blanks are prepared and analyzed within a test run for those tests requiring a digestion step prior to analysis. The results are placed in the parameter log book.
5. For those analyses where the laboratory does not have an outside reference sample, a real sample is analyzed in triplicate. The mean, standard deviation and relative standard deviation are calculated and the results are placed on the quality control sheets.

ALL METALS -- RCRA

ACTIVITY MONITORED	PROCEDURE	LIMITS	FREQUENCY
Normal QC Protocol	See Laboratory QC Protocol for detailed procedure and definitions (p. 51)	See tables for limits for each element.	Each Run
Calibration Curve	Run the standard curve.	See tables for limits for each element.	Every hour of continuous sample analysis
Duplicates	Run an unknown sample in duplicate.	- - - - -	Every 10 samples
Blanks & Standards Spikes	Method of standard additions.	- - - - -	EP extracts, new sample matrix, and samples for a delisting petition

;

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of non-checked above)	
TO: Kumar, Malkotra, (616) 361-5092	FROM: Rodney G. Daitch, U.S. EPA	DATE: 6-20-85 TIME: 3:04 pm	
SUBJECT: Johns-Manville Corporation			
SUMMARY OF COMMUNICATION			
<p>I returned Kumar's call, and he informed me that he wanted my opinion on which Pb, air monitoring device should be used. The choices were a Small's Portable Unit, Recorder Unit, or an Airport Recorder. I made the choice of a <u>Small's Portable Unit</u>. That was because this unit could be moved around. It will record the wind velocity, wind direction, and the high and low points, according to Kumar. Kumar asked if he could start around 6/27/85. I told him no, I would prefer the test to start in July or August. He also said he would submit the water analysis data (additional ones) regarding the anions.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
(Record of item checked above)			
TO: Steve Moser (303) 978-2672	FROM: Rodney G. Gaither U.S. EPA	DATE: 6-20-85	TIME: 10:00 Am
SUBJECT: Johns-Manville Corporation			
SUMMARY OF COMMUNICATION			
<p>I returned Steve Moser's call and he informed me that J-M needed additional time to consult with their consultants. Steve informed me that J-M was interested in doing all the tests the Agency required, except the <u>Air Asbestos</u> test. He said the study would be too expensive (\$60,000.00) to redo, J-M had followed U.S. EPA's previous protocol and while the Agency agreed, and that more numbers wouldn't too much make a difference. I explained the Agency's position on the matter as I did in 2 comments I submitted to J-M. I also explained the fact that Babette Neuberger left work, she would only allow a 15-day maximum response time period. Although if J-M wasn't in full agreement to cooperate with the Agency's requests, the <u>Extension of Time</u> would be denied. Steve said J-M would not probably</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
<p>submit any comments until around July 8, 1985. Steve said he probably would try to contact Barbara Nagel, Babette Neuberger's supervisor, this same day.</p>			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO: Rodney J. Parker U.S. EPA, HWB	FROM: Barbara Mgel ORC 6-6726	DATE: 6-20-85	TIME: 9:50 am
SUBJECT: Johns - Manville Corporation			
SUMMARY OF COMMUNICATION			
<p>Barbara returned my call, and I asked her about what I should do about informing J-M about an extension of time. She told me that Babette Neuhagen, ORC on this project, left word saying that if J-M didn't agree to all the Agency's comments a denial of <u>Extension of Time</u> would be requested. If J-M did agree there would be a 15 day maximum of time. Barbara said, if J-M wanted to talk to her, they could call, providing it was no later than today. Barbara informed me that she would be out of the office the following week.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

TO: Rodney G. Gaither
U.S. EPA

FROM: Kumar Malhotra

DATE 6-19-85

TIME 4:30 pm

SUBJECT: Johns-Manville Corporation

SUMMARY OF COMMUNICATION

Kumar returned a call to me stating the fact that he had talked to the Johns-Manville staff about the setting up of stations for Pb. He said that J-M gave their approval on the testing. He also said that J-M would probably call me and later send in writing, a request for an extension of time, regarding the responses to the Draft RI report. Kumar said that J-M still doesn't want to redo the air asbestos test. Kumar will call or write in, stating a time schedule for the Pb test to be done.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

ADDITIONAL COPIES

0:

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE	
		<input type="checkbox"/> OTHER (SPECIFY) _____	
		(Record of non-checked above)	
TO: Kumar Makhtia (616) 361-5092	FROM: Rodney G. Brinker U.S. EPA	DATE: 6-19-85 TIME: 10:00 AM	
SUBJECT: Johns-Manville Corp.			
SUMMARY OF COMMUNICATION <p>Kumar and I discussed the following:</p> <ul style="list-style-type: none"> o Johns-Manville will do surface restoration, etc. themselves. o 8 stations will be set up for Pb monitoring, <ul style="list-style-type: none"> 1. 4 on-site 2. 2 off-site 3. 2 on the beach o U.S. EPA didn't want a monitoring well set up on the active disposal pit, therefore causing the contractors trouble with supplying a complete ground-water route. More water analysis will be submitted. o Environmental Data, Inc. will do the lead testing. o Johns-Manville doesn't want to do the air asbestos testing again. o Babette Neuberger, attorney for U.S. EPA, is on vacation. 			
CONCLUSIONS, ACTION TAKEN OR REQUIRED <p>Kumar should get back in touch with me about some final conclusions.</p>			
INFORMATION COPIES TO:			

JUN 4 1985

SHE-12

Mr. Marvin Clumpus
Project Coordinator
Manville Service Corporation
P.O. Box 5108
Denver, Colorado 80217

Dear Mr. Clumpus:

The U.S. Environmental Protection Agency and two contracting agencies have reviewed the Draft Remedial Investigation Report (RI) produced by Kumar Malhotra & Associates, Inc. for the Johns-Manville Disposal area in Mankewan, Illinois.

The following comments are in response to that source of document.

Air Asbestos Study

- Ref. Vol. I, p. 3-14 What material still contains friable asbestos?
- Ref. Vol. I, p. 5-4 In direct contradiction to the Air and Fire
and explosion sections, the City of Mankewan
has reported litter blowing from the site and
fires that have occurred there. The latest fire
was reported in November, 1984.
- Ref. Vol. I, p. 2 Should a 0.4 instead of a 0.2 micrometer filter
been used? If so, what important results are
being left out if such a filter would've been
used?
- Ref. Vol. I, p. 5 Were all of the mean concentrations of fibers
based on length greater than 5 micrometers as
locations 2 and 5 were.
- Ref. Vol. II, p. A-4 If Ecology and Environment's conclusion of the
site appeared to meet requirements for a positive
air emission in the Hazard Ranking System (HRS),
then why was J-M placed on the National Priorities
List?

1. Interpretation of Asbestos Monitoring Study Results

The ORF Report (Collection and Analysis of Air Samples for the Mankewan Land-fill Ambient Asbestos Monitoring Study, 20 February 1985) makes only a limited attempt and the RI makes no attempt at all to assess the significance of measured on-site asbestos concentrations. Except for a brief sentence on page 5-1 of the RI, the issue of airborne asbestos is ignored in the Endangerment Assessment.

Results presented in Tables 7 through 25 of the ORF Report indicate that for amphibole fibers, there are no significant differences between measured on- and off-site concentrations. For chrysotile fibers of all lengths, on-site concentrations (0.022 fibers/ml) were statistically significantly higher than off-site concentrations (0.005 fibers/ml) than the means for upper 95% confidence limits were compared. This comparison did not take into account blank filter concentrations (see item 5 below). Most chrysotile fibers (100% of fibers counted for off-site filters, 90% for on-site filters) were shorter than 5 μ .

The average mass concentration for chrysotile fibers (calculated from Tables 12 through 21 of the ORF Report) were 6.1 ng/m³ on-site and 0.013 ng/m³. Thus, even after accounting for blank levels, on-site average mass concentrations were much higher than off-site.

Possibly, the statement on page 1-1 of the RI -- that only fibers longer than 5 μ are generally associated with health risk -- is intended to serve as a justification for largely ignoring elevated on-site asbestos levels in interpreting study results. Although shorter fibers may be less toxic, there is no general consensus that fibers shorter than 5 μ are biologically inactive. Similarly, there is no universal agreement that chrysotile fibers are less hazardous than amphiboles.

Uncertainties in the dose-response relationship for asbestos and lung cancer or mesothelioma and the difficulties of extrapolating high dose occupational study results down to lower exposure levels make it hard to define the risks of breathing asbestos in ambient air. Nevertheless, a recent study by the National Research Council (as reported in Zurer, 1985) estimated maximum individual lifetime (73 years, continuous exposure from birth) lung cancer risks of 130 per million for male non-smokers exposed to 0.002 fibers/ml. For male smokers, the maximum risk estimate was 1500 per million because of the synergistic relationship between smoking and asbestos exposure (NIOSH, 1976). Due to the uncertainties inherent in such risk assessments, lower limits for lifetime risks were estimated at zero per million.

The average measured on-site fiber concentration in the ORF Report is 5 to 10 times higher (depending on whether or not it is corrected for blank counts) than the 0.002 fibers/ml level above. On this basis, there is at least the potential for adverse health effects due to long term exposure to on-site asbestos air concentrations. This issue should have been addressed in the RI as part of the Endangerment Assessment in Section 5.

2. Air Monitoring Study Objectives

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however, there is no attempt to estimate potential asbestos exposure for this population. This discussion should have been included in the RI as part of the Section 5 Endangerment Assessment.

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Geotechnical and Hydrological Investigation

- Ref. Vol. I, p. 3-5 When and how often are plant waste materials levelled and covered?
- Did or didn't J-11 receive trace quantities of chromium, lead, thiram, and xylene? Were these materials used for such matters as wash solvents, by-products, etc?
- Ref. Vol. I, p. 3-6 What is the significance of the article "Summary of The Geology of The Chicago Area" in relation to the site in Maukegan, Illinois?
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There are areas of concern that need to be addressed. First, there was no recognition of the fact, that a potential pathway for lead, to be transported off-site through extreme storm wave actions, was even looked at. Second, it is not known whether the heated water discharge canal on the utility property to the south represents recharge or discharge with respect to the ground water. Whereas the J-M contractor concludes the ground water moves northward across the site and then east to Lake Michigan, it's believed that a better interpretation, is that the entire J-M waste disposal area creates a mound in the upper confined ground-water system causing local flow on-site to be 1) towards the north from the waste disposal and settling basin area to the industrial canal, 2) towards the east to Lake Michigan from the settling and collection basin area, 3) towards the south from the southerly portions of the disposal area, and 4) towards the west from the westerly portions of the disposal area.

Conclusions and Recommendations of the Draft Remedial Investigation Report

Based on the preceeding issues and facts, the U.S. EPA would like to state and recommend the following conclusions:

1. The RI does not address the issue of potential asbestos exposure for residents of the area surrounding the site as required by the June 14, 1984 Consent Order between Johns-Manville and U.S. EPA, Region 5. The potential significance of elevated on-site Chrysotile fiber levels, should be discussed in the RI and incorporated into the report as part of the Endangerment Assessment.

2. Several factors which could have an impact on fugitive air emissions of lead and asbestos from the Johns-Manville disposal area are not adequately addressed in the RI. These factors include current management practices for controlling the release of fugitive dust and the effect of climate. In particular, the air monitoring study of asbestos levels appear to have been carried out under conditions that do not reflect the maximum potential generation rate. Nevertheless, elevated levels of chrysotile fibers were reported for on-site measurements.
3. The conclusion of the RI that on-site lead levels do not pose a significant potential human health and environmental risk is inappropriate in the absence of data for air concentrations of lead. On-site lead levels in air should be measured and compared with appropriate background levels and with the NAAQS for lead.
4. Johns-Manville should perform additional air monitoring for asbestos. Testing should be done either in the month of July or August. These are probably the driest months of the year. This would certainly indicate whether a substantial threat is evident to, not only employees at the site, but to residents off-site as well.
5. In addition, air monitoring should be conducted for lead on-site and on the beach.
6. There should be more data concerning the drinking water quality. This includes a complete analysis of common inorganic anions. This analysis of common inorganic anions would give us significant information on the ground water movement in the vicinity of the disposal area. The present water quality is primarily in terms of heavy metals-cations.
7. After data has been submitted regarding these actions, it should be specifically addressed in the Endangerment Assessment whether there's an immediate or future threat to society, wildlife, or the environment in that vicinity.
8. Pursuant to the document, Order Granting Extension of Time, the U.S. EPA will expect a final Remedial Investigation Report within 2 weeks of receipt of preliminary comments. The report should include a time schedule for the additional field work required above.

Sincerely yours,

Rodney G. Gaither, PPI

cc: P. Diefenbach

B. Neuberger

JUN 4 1985

GHE-12

Mr. Harvin Clumpus
Project Coordinator
Manville Service Corporation
P.O. Box 5108
Denver, Colorado 80217

Dear Mr. Clumpus:

The U.S. Environmental Protection Agency and two contracting agencies have reviewed the Draft Remedial Investigation Report (RI) produced by Kumar Malhotra & Associates, Inc. for the Johns-Manville Disposal area in Mokenan, Illinois.

The following comments are in response to that source of document.

Air Asbestos Study

- Ref. Vol. I, p. 3-14 What material still contains friable asbestos?
- Ref. Vol. I, p. 5-4 In direct contradiction to the Air and Fire
and explosion sections, the City of Mokenan
has reported litter blowing from the site and
fires that have occurred there. The latest fire
was reported in November, 1984.
- Ref. Vol. I, p. 2 Should a 0.4 instead of a 0.2 micrometer filter
been used? If so, what important results are
being left out if such a filter would've been
used?
- Ref. Vol. I, p. 5 Were all of the mean concentrations of fibers
based on length greater than 5 micrometers as
locations 2 and 5 were.
- Ref. Vol. II, p. A-4 If Ecology and Environment's conclusion of the
site appeared to meet requirements for a positive
air emission in the Hazard Ranking System (HRS),
then why was it placed on the National Priorities
List?

1. Interpretation of Asbestos Monitoring Study Results

The RI Report (Collection and Analysis of Air samples for the Mokenan Landfill Ambient Asbestos Monitoring Study, 20 February 1985) makes only a limited attempt and the RI makes no attempt at all to assess the significance of measured on-site asbestos concentrations. Except for a brief sentence on page 4-1 of the RI, the issue of airborne asbestos is ignored in the Ecological Assessment.

Results presented in Tables 7 through 25 of the ORF Report indicate that for amphibole fibers, there are no significant differences between measured on- and off-site concentrations. For chrysotile fibers of all lengths, on-site concentrations (0.022 fibers/ml) were statistically significantly higher than off-site concentrations (0.005 fibers/ml) than the means for upper 95% confidence limits were compared. This comparison did not take into account blank filter concentrations (see item 5 below). Most chrysotile fibers (100% of fibers counted for off-site filters, 90% for on-site filters) were shorter than 5 μ .

The average mass concentration for chrysotile fibers (calculated from Tables 12 through 21 of the ORF Report) were 6.1 ng/m³ on-site and 0.013 ng/m³. Thus, even after accounting for blank levels, on-site average mass concentrations were much higher than off-site.

Possibly, the statement on page 1-1 of the RI -- that only fibers longer than 5 μ are generally associated with health risk -- is intended to serve as a justification for largely ignoring elevated on-site asbestos levels in interpreting study results. Although shorter fibers may be less toxic, there is no general consensus that fibers shorter than 5 μ are biologically inactive. Similarly, there is no universal agreement that chrysotile fibers are less hazardous than amphiboles.

Uncertainties in the dose-response relationship for asbestos and lung cancer or mesothelioma and the difficulties of extrapolating high dose occupational study results down to lower exposure levels make it hard to define the risks of breathing asbestos in ambient air. Nevertheless, a recent study by the National Research Council (as reported in Zurer, 1985) estimated maximum individual lifetime (73 years, continuous exposure from birth) lung cancer risks of 130 per million for male non-smokers exposed to 0.002 fibers/ml. For male smokers, the maximum risk estimate was 1500 per million because of the synergistic relationship between smoking and asbestos exposure (NIOSH, 1976). Due to the uncertainties inherent in such risk assessments, lower limits for lifetime risks were estimated at zero per million.

The average measured on-site fiber concentration in the ORF Report is 5 to 10 times higher (depending on whether or not it is corrected for blank counts) than the 0.002 fibers/ml level above. On this basis, there is at least the potential for adverse health effects due to long term exposure to on-site asbestos air concentrations. This issue should have been addressed in the RI as part of the Endangerment Assessment in Section 5.

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Geotechnical and Hydrological Investigation

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8. Pursuant to the document, Order Granting Extension of Time, the U.S. EPA will expect a final Remedial Investigation Report within 2 weeks of receipt of preliminary comments. The report should include a time schedule for the additional field work required above.

Sincerely yours,

Rodney C. Baither, "PHI"

cc: R. Diefenbach

R. Neuberger

Manville Service Corporation
Ken-Caryl Ranch POB 5723
Denver, Colorado 80217
303 978-2000

Manville

RECEIVED

June 20, 1985

JUN 24 1985

Mr. Rodney Gaither
Project Coordinator
U.S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Re: Johns-Manville Disposal Area RI/FS

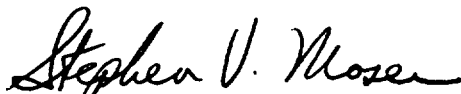
Dear Mr. Gaither:

Johns-Manville is hereby requesting additional time in which to submit its final Remedial Investigation ("RI") Report. As we discussed this morning, we need approximately two more weeks because of the length of USEPA's preliminary comments and the mechanical difficulties in coordinating our consultants' reviews. We propose to submit our responses to the Agency's comments and a final RI Report incorporating those responses as appropriate no later than July 8, 1985.

Section VIII.F. of the Consent Order authorizes the Regional Administrator or his designee to extend deadlines for up to fifteen additional working days without formally modifying the Consent Order. We propose and request that the Agency follow this approach and avoid the unnecessary complexity of a formal modification.

Thank you for your cooperation.

Very truly yours,



Stephen V. Moser
Alternate Project Coordinator

SVM/pw

cc: Basil G. Constantelos, USEPA
File/Chrono

Section No. 14.0
Revision No. 1
Date: June 24, 1984
Page 1 of 1

14.0 Specific Routine Procedures Used to Assess Data Precision, Accuracy and Completeness

This information is provided under "Internal Quality Control Check Section 11" of this manual. Additional information is provided in 'Quality Assurance Manual' and 'Methods Manual' prepared by IEPA Laboratories.

Section No. 15.0
Revision No. 1
Date: June 24, 1984
Page 1 of 1

15.0 Corrective Action

Most corrective actions are described under Internal Quality Control checks and data reporting. When data seems to be out of control and needs corrective action, the quality assurance coordinator or section supervisor is contacted and he or she will take the proper corrective action described in previous sections.

Manville Service Corporation
Ken-Caryl Ranch POB 5108
Denver, Colorado 80217
303 978-2000

Manville
Manville

RECEIVED
AUG 27 1984

August 21, 1984

Basil G. Constantelos
Director, Waste Management Division
U.S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, IL 60604

REMEDIAL
RESPONSE BRANCH

RECEIVED

AUG 27 1984

U.S. ENVIRONMENTAL PROTECTION AGENCY
WASTE MANAGEMENT DIVISION
OFFICE OF THE DIRECTOR

Re: Johns-Manville Disposal Area RI/FS

Dear Mr. Constantelos:

I am pleased to announce that the United States Bankruptcy Court has approved, effective August 9, 1984, the Administrative Order by Consent (the "Consent Order") entered into between Johns-Manville Sales Corporation ("J-M") and the United States Environmental Protection Agency ("USEPA") concerning J-M's Waukegan Facility Disposal Area. This means that we can begin in earnest to perform the work contemplated in the Consent Order.

Of course, as you know, J-M undertook and completed some of the work covered by the Consent Order even before the negotiation and approval process had run its course. That work, however, has never been formally approved by USEPA. Article V.C.1. of the Consent Order provides that "Johns-Manville shall submit to USEPA for approval the Work upon its completion" and that "USEPA shall review the Work and indicate its approval or disapproval of the Work within thirty days of receipt of the Work submitted." Since the Consent Order is now effective, we wish to submit for your review and approval the following work:

1. In accordance with Article IV.A.1. of the Consent Order, J-M has installed warning signs along the perimeter of the Disposal Area at the locations identified in Exhibit 2C.
2. In accordance with Article IV.A.2., J-M completed the water balance study referred to therein and submitted its final report on or about April 17, 1984.

J-M fully intends to proceed with and implement the Consent Order as quickly and efficiently as conditions allow. We trust that USEPA is equally committed.

RECEIVED
AUG 28 1984

Remedial Response
Section II

RECEIVED
AUG 27 1984

REMEDIAL
RESPONSE BRANCH

Basil G. Constantelos
August 20, 1984
Page Two

Your cooperation and assistance in this regard is greatly appreciated.

Very truly yours,

A handwritten signature in cursive script, appearing to read "K. Nerheim".

K. (Chet) Nerheim
Manager
Assets Recovery

Manville Service Corporation
Ken-Caryl Ranch POB 5108
Denver, Colorado 80217
303 978-2000

Manville

August 20, 1984

Basil G. Constantelos
Director, Waste Management Division
U. S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, IL 60604

RECEIVED
AUG 27 1984
**REMEDIAL
RESPONSE BRANCH**

Re: Johns-Manville Disposal Area RI/FS

Dear Mr. Constantelos:

Pursuant to Article VIII of the Administrative Order by Consent ("Consent Order") entered into between Johns-Manville Sales Corporation ("J-M") and the United States Environmental Protection Agency ("USEPA"), I have been designated as the J-M Project Coordinator. Therefore, all major communications concerning the implementation and status of the Consent Order should be directed initially to me as follows:

K. (Chet) Nerheim
Manville Service Corporation
P. O. Box 5108
Denver, Colorado 80217
(303) 978-3929

Because of the complexity and technical nature of the Consent Order, I have designated several "Alternate Project Coordinators" with primary areas of responsibility, as follows:

Stephen V. Moser (Overall)
Manville Service Corporation
P. O. Box 5723
Denver, Colorado 80217
(303) 978-2672

James H. Whipple (RI/FS: Soil and Groundwater)
Manville Service Corporation
P. O. Box 5108
Denver, CO 80217
(303) 978-3750

Dr. James P. Leineweber (RI/FS: Air)
Manville Service Corporation
P. O. Box 5108
Denver, CO 80217
(303) 978-3118

RECEIVED

AUG 23 1984
U.S. ENV. REGION V
WASTE MANAGEMENT DIVISION
OFFICE OF THE DIRECTOR

Basil G. Constantelos
August 20, 1984
Page Two

Michael Debish (On-Site Coordinator)
Johns-Manville Sales Corporation
P. O. Box 228
Waukegan, IL 60087
(312) 623-2900

Richard Jonas (Alternate On-Site Coordinator)
Johns-Manville Sales Corporation
P. O. Box 228
Waukegan, IL 60087
(312) 623-2900

These individuals should be contacted in my absence or where the communications involve technical or minor matters within their respective areas of responsibility.

I am committed to frequent and open communications with your agency during the pendency of the Consent Order and trust that you are as well. We are determined to implement the terms of the order as smoothly and efficiently as possible. We look forward to your cooperation and assistance in this effort.

Sincerely,



K. (Chet) Nerheim
Manager, Assets Recovery

Manville Service Corporation
Ken-Caryl Ranch POB 5108
Denver, Colorado 80217
303 978-2000

Just
Manville

August 22, 1984

CERTIFIED, RETURN RECEIPT REQUESTED

Basil G. Constantelos
Director, Waste Management Division
U. S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, IL 60604

RECEIVED
AUG 27 1984
U.S. ENVIRONMENTAL PROTECTION AGENCY
WASTE MANAGEMENT DIVISION
CHIEF OF REGION V DIRECTOR

Re: Johns-Manville Disposal Area RI/FS

Dear Mr. Constantelos:

In order to fully comply with Article V.D.1. of the Consent Order, I am submitting in duplicate the enclosed letters. These letters identify Johns-Manville's Project Coordinator and Alternate Project Coordinators and are submitted for USEPA's review and approval for work completed by Johns-Manville before the effective date of the Consent Order. The originals of these letters mistakenly were sent to you via regular mail.

I regret any inconvenience this may have caused you.

Sincerely,

K. Nerheim /VJM

K. (Chet) Nerheim
Manager, Assets Recovery

KN/vfm
Enclosures

RECEIVED

AUG 27 1984

REGIONAL
RESPONSE BRANCH



Illinois Environmental Protection Agency · 2200 Churchill Road, Springfield, IL 62706

217/782-9804

Refer to: 09719014 -- Lake County
Waukegan/Johns-Manville
Superfund/General Correspondence

August 17, 1984

Mr. Russell Diefenbach
USEPA - Region V
230 South Dearborn
Chicago, Illinois 60604

Dear Mr. Diefenbach:

This letter is to request that the On-Scene Coordinator's role defined for this site in the Consent Order be delegated to the Illinois Environmental Protection Agency.

The IEPA is willing to dedicate the personnel necessary to provide the needed oversight for implementing the USEPA Consent Order along with the parallel State administrative order.

This request is contingent upon IEPA being reimbursed by Johns-Manville for response cost that the Agency incurs each year in accordance with Article XIII of USEPA's Consent Order.

Should you have any questions please contact me at the above number.

Sincerely,

Robert K. Cowles

Robert K. Cowles, P.E., Manager
Remedial Response Unit
Hazardous Substance Control Section
Division of Land Pollution Control

RKC:mkb:S/2

cc: Jim Frank
Don Gimbel
Tom Cavanagh
Scott Phillips

Vanessa Musgrave
U.S. EPA Region V
230 S. Dearborn, 14th Floor
Chicago, Il. 60604

July 30, 1984
Comments on an administrative
consent order, Johns-
Manville Sales Corp. of June
14, 1984.

The lateness but timely response of this public response is due to the absence of a copy of this consent order at the Waukegan public library until today.

It is apparent that the only area to apply this order involves only as it applies to the Johns-Manville Waukegan manufacturing area. Hence my comments apply to the other areas around and about this area as follows;

1. There should be coverage to the testing, monitoring, and, correction for hazardous wastes from the Johns-Manville area to,
 - a. Illinois State Park and Beach and Lake Michigan,
 - b. Same for the waters and sediments of the Lake Michigan shores and water from the Illinois State Line to, the north, at least 10 miles east of these shores, and especially the water and sediments 10 miles south, mostly due to the prevailing currents of Lake Michigan is southerly,
 - c. Same for the southerly inland area including the Waukegan Harbor,
 - d. Same for westerly area especially at lagoons, ponds, street and land drainage and runoff.
2. It should be noted that what appears to be on map A 36122-4 titled "Settling Basin" and "Collection Basin" as a low flat area, that this is a very high pile of waste releases "dust" that is carried by the prevailing westerly winds to Lake Michigan as observed by my self and fishing passengers while trolling for Salmon and Trout in this area.

This concludes my comments, and, we would appreciate a copy of your response both mine and any others.

Sincerely,



Gockel Marine Charters
25156 W. Columbia Bay
Lake Villa, Il. 60046
312-356-7016

AUG 01 1984

Mr. Tom Gockel
Gockel Marine Charters
25156 W. Columbia Bay
Lake Villa, Illinois 60046

Re: Response to Comments on Proposed
Administrative Consent Order
Johns-Manville Sales Corp.

Dear Mr. Gockel:

Thank you for your comments on the proposed Administrative Consent Order between the United States Environmental Protection Agency (U.S. EPA) and Johns-Manville Sales Corp. The Agency appreciates your interest in the Waukegan lake front area. In your comments, you suggested that Johns-Manville be requested to investigate a large area surrounding their own property. At this time the U.S. EPA does not have any evidence that Johns-Manville may have created a contamination problem beyond their own facility and therefore has no authority to require the additional investigatory work you mentioned. However, the U.S. EPA will continue to be interested in that region and should evidence develop linking Johns-Manville to new areas of contamination, the Agency will look to that corporation for an appropriate response. As to your comments about dust control, the proposed Consent Order will require Johns-Manville to eliminate the asbestos dust problem emanating from their facility. Once again, thank you for your interest in the Johns-Manville proposed Order. Please feel free to contact me if you have any additional questions or comments.

Very truly yours,

Barbara Nagel for
Rabette Fleuburger
Assistant Regional Counsel



Lake County Economic Development Commission

July 26, 1984

U.S. EPA
Vanessa Musgrave
230 S. Dearborn
14th Floor
Chicago, IL 60604

RE: Administrative consent order regarding the Johns-Manville Sales Corporation Waukegan facility.

Dear Ms. Musgrave,

The Lake County Economic Development Commission urges swift action by the Environmental Protection Agency, and by the Johns-Manville Corporation in the use of Superfund monies to clean up the entire Manville site in Waukegan, including the asbestos piles, the lagoons and channels, and any contamination within the buildings. Our call for immediate and thorough action is based on safety, recreational, and economic considerations.

1) Safety

We are concerned about the health hazards from airborne asbestos from the estimated 600,000 tons of asbestos containing waste which have been deposited on this 120 acre site since 1923. We are also concerned about the release or threat of release of hazardous substances into the ground water. The asbestos pile is only 100 feet from Lake Michigan.

2) Recreation

Hundreds of fishermen use the Commonwealth Edison fishing pier which is only a few dozen yards from the asbestos pile. Health hazards to them from inhaling airborne asbestos are unknown. In addition, the Lake Michigan Shoreline Plan, published in November, 1983 by the City of Waukegan, the City of North Chicago and the Waukegan Port Authority (copy attached) calls for continuous public access along the shoreline. No responsible recreation or park agency will develop the shoreline here for public access until the threat of environmental hazard is removed. Since the Chicago Metropolitan area is in critical need of waterfront recreational resources for its 7 million people, every day that this problem goes unresolved is a day of continuing unmet recreational need for this recreation-hungry population.

RECEIVED

JUL 27 1984

JUL 31 1984

3) Economic Considerations

Perhaps as much as a billion dollars in public and private investment is possible on the Waukegan/North Chicago lakefront. That includes new marinas, hotel and convention facilities, completion of the lakefront Parkway, mixed use and residential development. The ponds and lagoons of the Manville plant, now containing hazardous waste, could, if cleaned up, provide much needed marina space on the lakefront. Real estate value of the property will appreciate considerably once the site is cleaned up.

In addition to value of the Manville property itself, the value of neighboring properties and, in fact, the image of lakefront communities, is intricately tied to the hazardous waste problems at both Manville and Outboard Marine. So long as people continue to think of Waukegan as the City of PCB's and asbestos, we will have an ongoing negative image which makes the task of economic development all the more difficult.

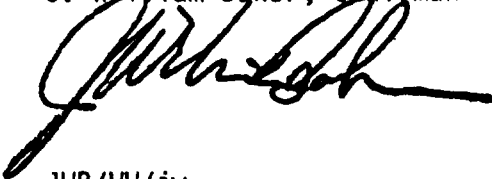
Summary

For reasons of safety, recreation, and economic considerations, we urge you and the Manville Corporation to make swift use of Superfund monies to remove this threat to the air and water of the Waukegan lakeshore.

Sincerely,

LAKE COUNTY ECONOMIC DEVELOPMENT COMMISSION

J. William Baker, Chairman



JWB/WW/jw

RECEIVED

APR 31 1984

AUG 9 1 1984

Mr. J. William Baker, Chairman
Lake County Economic Development
Commission
Room A-803
14 North County Street
Waukegan, Illinois 60085

Re: Johns-Manville Administrative
Consent Order
Waukegan, Illinois

Dear Mr. Baker:

Thank you for your letter in response to the United States Environmental Protection Agency's (U.S. EPA) notice of an Administrative Consent Order with Johns-Manville concerning remedial activities at their Waukegan facility. The U.S. EPA shares your concern about the hazardous waste problems associated with the Johns-Manville facility and the proposed Consent Order represents the Agency's effort to resolve those problems in the most effective and expeditious manner possible. Under the Consent Order, Johns-Manville will bear the costs of remedial activities at their site and the U.S. EPA will carefully monitor their actions. Since there is a private entity able to undertake remedial measures, the so called "Superfund" will not be expended on the site at this time. Should Johns-Manville become unwilling or unable to complete necessary remedial work, the U.S. EPA may consider expenditures of federal funds. The Agency appreciates your organization's interest and concern.

Very truly yours,

Barbara Magel for
Sabette Neuberger
Assistant Regional Counsel

bcc: Vanessa Muggrave

Review of the Hydrological Investigation Workplan for
The Johns-Manville 106 Order

Richard Bartelt, Chief
Remedial Response Branch

James H. Adams, Jr., Chief
Quality Assurance Office

Attached is the workplan produced for Manville as the first deliverable toward completion of the Geotechnical and Hydrological Investigation required in the CERCLA Section 106 consent order. Please review this plan for its quality assurance aspects. We will need your comments, if any, by August 9, 1984 in order to incorporate them in any necessary revisions.

Comments or questions may be directed to Bill Mains at 886-3009.

RRSII
LDM
7/30/84

RRS II
RED
7.30.84

GW
7/30/84
JLB

J.H.A.
acting RRB
30 July 84

Hydro-geo Investigation Work Plan for Johns-Manville

William D. Mains
Remedial Response Section II

Christopher Grundler
Compliance Branch, COPE (JH-527)

Attached is a copy of the draft work plan for the Manville Geotechnical and Hydrological Investigation. I have also provided a review copy to the Regional Quality Assurance Office. Mr. James Whipple, the contract manager for Manville, would like to have the initial technical kick-off meeting for the contract at the Haukegan plant site the week of August 13th or 20th. It is my hope I can provide all pertinent comments to Mr. Whipple in time to have a completed, acceptable work plan from Manville on that schedule.

cc: Babette Neuberger 50

Attachment

MAINS:REMEDIAL RESPONSE SECTION II:7/28/84:ddw diskette #7

RRSII
UDM
7/31/84



• ENGINEERS • CONSULTANTS • PLANNERS •

KUMAR MALHOTRA & ASSOCIATES, INC.

3000 East Belt Line N.E.
Grand Rapids, Michigan 49505
Telephone (616) 361-5092

July 27, 1984

Mr. William D. Mains
U.S. Environmental Protection Agency
Region V
230 Dearborn Street
Chicago, Illinois 60604

Re: Johns-Manville Waste Disposal Site
Waukegan, Illinois Project S95-3224

Dear Bill:

Thank you for your prompt response in supplying a copy of the RAMP on the above referenced project. I am enclosing three copies of the draft Work Plan for the geotechnical and hydrogeologic investigations at this site for planning possible future remedial response actions. Please feel free to contact me or Jim Whipple if you have any questions regarding this material. We would be very happy to meet with you to discuss any comments or suggestions you may have in the near future.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'S.K. Malhotra', written in a cursive style.

S.K. Malhotra, Ph.D., P.E.

Enclosures

cc: J.H. Whipple
Johns-Manville Corp.

Roger Harrison, Director
Department of Energy and Environment
City of Waukegan
106 North Utica
Waukegan, Illinois 60085

Dear Mr. Harrison:

As promised in our July 17th telephone conversation, enclosed is the Johns-Manville 106 Order by Consent with attachments (no blueprints). A set of blueprints are included in the public docket available at the Waukegan Public Library. Also enclosed are copies of EPA press releases announcing the 106 Order and extension of the comment period.

Sincerely,

William D. Mains
On-Scene Coordinator

Enclosure

MAINS:REMEDIAL RESPONSE SECTION II: smw/ddw diskette #4 7/17/84

7/19/84
RRSII
WDM



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:

SHR-13

10-134
S.K. Malhotra
KMS Incorporated
3000 E. Beltline N.E.
Grand Rapids, Michigan 49505

Dear Sir:

As promised in our July 5th telephone conversation, the following are enclosed:

1. Johns-Manville RAMP
2. QAMS-005/80 QAPP guidelines
3. Standard Operating Safety Guides (1/28/83)

I have removed the original cost estimates from the RAMP, since they are no longer useful.

Sincerely,

A handwritten signature in cursive script, appearing to read "William D. Mains".

William D. Mains
On-Scene Coordinator

11 JUN 1984

QA Plan for the Johns-Manville Site In Waukegan, Illinois

Richard E. Bartelt, Chief
Remedial Response Branch

James H. Adams Jr., Chief
Quality Assurance Office

On June 19, 1984, Region V finalized an Order by Consent with the Johns-Manville Sales Corporation requiring Manville to conduct a Remedial Investigation (RI) at their Waukegan asbestos site. The bulk of the RI work will be performed by a contractor, including a QA plan consistent with EPA guidance. We are providing the contractor with a copy of the December 29, 1980, Interim Guidelines (OAMS-005/80).

We request you provide guidance for the Manville contractor (S.K. Malhotra, KMA Inc., Grand Rapids, MI) if contacted by him with questions about his QA plan development. The OSC for this site is Bill Mains, who will be your contact at 886-3009.

cc: Babette Neuberger, 5C

MAINS:REMEDIAL RESPONSE SECTION II:7/6/84:ddw diskette #3:

RRST
C. DM
7/9/84

RRST
REP
7/11/84

PWJ
7/11/84

SABBY
RAB
7/11/84

July 10, '84

Subject: Estimated Cost of Oversight of The Manville 106 Orders
From: Bill Mains
To: Bette Neuberger

I have made an estimate of EPA and EPA Contractor time required for oversight activities. All travel is to Waukegan only, including the kick-off meeting with The contractor and Manville

<u>Activity</u>	<u>EPA</u>	<u>EPA Contractor</u>
106 Order Comment Review	2 days	
Work Plan Review	5 days	
RI kick-off meeting	1 day	
RI field trips @ 1 day per	10 days	
RI Review	5 days	(TES) 5 days
Misc review & assistance	7 days	
	<u>27 days</u>	<u>5 days</u>

At \$120/day, EPA time = \$3240
CH₂M-Hill Overhead Factor $\times 1.71$
\$5540 } total = \$8780 EPA cost

Contractor time 40 hrs \times \$75/hr = \$3000

Car expenses POV \approx \$250.00 GSA car (unknown)

Result The total cost recovery amount will range \$12,000 - 15,000 with this estimate at \$12,030

JUN 15 --

James W. Whipple, P.E.
Senior Staff Engineer
Hanville Service Corporation
Ken-Caryl Ranch
Denver, Colorado 80217

Dear Mr. Whipple:

We have reviewed the latest version of the Geotechnical and Hydrological Investigation Specifications for the Hanville site in Haxeyan and find it acceptable. We appreciate your willingness to negotiate the points necessary to achieve an acceptable Exhibit 2 for inclusion in the Administrative Order by Consent between U.S. EPA and Johns-Hanville Sales Corporation.

While we do not anticipate problems, in the event the Administrative Order by Consent is not finally approved by both parties and The United States Bankruptcy Court, U.S. EPA will conduct the remedial investigation called for on the consent order, including items from Exhibit 2, and seek reimbursement from the Johns-Hanville Sales Corporation.

Sincerely yours,

Dasil G. Constantinos, Director
Waste Management Division

cc: Steven Moser
Hanville Service Corporation

Carolyn Lown
Schiff Hardin and Waite

bcc: Babette Heuberger, SRC

MAINS:REMEDIAL RESPONSE SECTION II:6/8/84:ddw diskette #1

JUN 15 1984

James H. Whipple, P.E.
Senior Staff Engineer
Manville Service Corporation
Ken-Caryl Ranch
Denver, Colorado 80217

Dear Mr. Whipple:

We have reviewed the latest version of the Geotechnical and Hydrological Investigation Specifications for the Manville site in Waukegan and find it acceptable. We appreciate your willingness to negotiate the points necessary to achieve an acceptable Exhibit 2 for inclusion in the Administrative Order by Consent between U.S. EPA and Johns-Manville Sales Corporation.

While we do not anticipate problems, in the event the Administrative Order by Consent is not finally approved by both parties and The United States Bankruptcy Court, U.S. EPA will conduct the remedial investigation called for on the consent order, including items from Exhibit 2, and seek reimbursement from the Johns-Manville Sale Corporation.

Sincerely yours,

Basil G. Constantelos, Director
Waste Management Division

cc: Steven Moser
Manville Service Corporation

Carolyn Lown
Schiff Hardin and Waite

bcc: Babette Neuberger, SRC

MAINS:REMEDIAL RESPONSE SECTION II:6/8/84:ddw diskette #1

WDM
STR-13
6/11/84

RRSTII
RED
6.11.84
pw
Watts
2/11/84

S. R. R. R.
BEB
6/11/84

JD
6/14/84
BEB 6/15/84

JUN 19 1984

Carolyn A. Lown, Esq.
Schiff, Hardin & Waite
7200 Sears Tower
Chicago, Illinois 60606

Re: Johns-Manville Sales Corporation
Waukegan, Illinois

Dear Carolyn:

Enclosed please find a signed copy of the Administrative
Order by Consent.

Very truly yours,

Babette J. Neuberger
Assistant Regional Counsel

Enclosure

bcc: Mains w/out enclosure



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Bill Mains

JUN 15 1984

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Concurrence on the Issuance of CERCLA §106 Administrative Order to Johns-Manville, Inc., Waukegan, Illinois
Francis J. Bixos

FROM: Francis J. Bixos, Acting Director
CERCLA Enforcement Division, OWPE

TO: Valdas V. Adamkus, Regional Administrator
Region V

I have reviewed the Findings of Fact, Determinations and provisions of the subject Order and hereby concur that the actual and threatened release of hazardous substances from the site may present an imminent and substantial endangerment to public health, welfare or the environment. Further, I concur that the response actions ordered are necessary to protect public health and the environment and concur with the issuance of the Order.

Please send me a copy of the final signed Order as soon as possible.

cc: Robert Schaefer

O: RC
cc: RF
RA
WMD
ESD

RECEIVED

JUN 25 1984
EPA REGION 5
OFFICE OF REGIONAL
ADMINISTRATION

RECEIVED

JUN 29 1984

REMEDIAL
RESPONSE BRANCH

JUN 14 1984

RECEIVED
JUN 18 1984

**Remedial Response
Section II**

William E. Blakney, Esq.
Assistant Attorney General
Environmental Control Division
188 West Randolph Street
Suite 2315
Chicago, Illinois 60601

Donald L. Gimbel, Esq.
Illinois Environmental Protection Agency
1701 South First Avenue
Suite 600
Maywood, Illinois 60153

Re: Johns-Manville Sales Corporation
Waukegan, Illinois

Gentlemen:

Enclosed please find the Administrative Order by Consent which is expected to be issued to Johns-Manville Sales Corporation by early next week. The enclosed copies of the Order do not include blueprints of Exhibit 2. On June 1, 1984, Johns-Manville sent copies of Exhibit 2, including the blueprints, directly to Dave Favors at the IEPA-Springfield office.

If you have any questions regarding this matter, please feel free to contact me.

Very truly yours,

Babette J. Neuberger
Assistant Regional Counsel

Enclosures

bcc: William Mains, RRB ✓

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Name of person called above)	
TO: John Dingo, PRC 938-0300 X 292	FROM: R. Gaither, HWEB	DATE: 9-5-85 TIME: 2:00 pm	
SUBJECT: Johns-Manville			
SUMMARY OF COMMUNICATION			
<p>John gave me the address and telephone number to Ron Lantz regarding Johns-Manville. Ron will evaluate the final report from J-M on groundwater and water quality data. Ron's address and phone number are:</p> <p style="text-align: center;"> Intera Technologies, Inc. 6850 Austin Center Blvd. Suite 300 Austin, Texas 78731 (512) 346-2000 </p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Number of how many had shown)

TO: R. Baither,
HWEB

FROM: Betsy Outman,
(TS-798) HQ

DATE 9-3-85

TIME 2:25 pm

SUBJECT: Johns-Manville Site

SUMMARY OF COMMUNICATION

Betsy told me she had talked to Russ Diefenbach (my supervisor) about not being able to submit the report by today (9-3-85). She said she was experienced enough to give any approval on the asbestos problems at J-M. Betsy gave the report to a Burt Price of Batelle and it may be returned in a week and a half.

Betsy expressed that she didn't receive the project until the last minute from her supervisor, Dr. Joseph Breen. The report will be sent to me after Mr. Price finishes reviewing it. Betsy also noted that there are contract problems and she would try her best to get the report back to me as soon as possible.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

0.

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Print or type name of person(s) called)

TO: Rodney D. Daiter,
U.S. EPA

FROM: Betsy Outreau,
(TS-798)

DATE: 8-27-85

TIME: 7:45 AM

SUBJECT

Johns-Manville Site

SUMMARY OF COMMUNICATION

Betsy called and told me that she was the one assigned to the project. She said she was new to the asbestos problem. She is going to assign this to someone who knows more about asbestos than she. She said she couldn't contract out to Battelle because the hours were not there. Betsy said she would call Friday and let me ^{know} if I could get the report by next Tuesday (9-3-85).

REMARKS, ACTION TAKEN OR REQUIRED

FORMATION COPIES

AUG 3 1985

DATE:

SUBJECT: Trip Report - Johns Manville, Waukegan Disposal Area

FROM: Rodney G. Gaither, RPM
ILL-IND Unit

TO: Russell E. Diefenach, Chief
Ill-IND Unit

On August 6, 1985, I traveled to the Johns-Manville Waukegan Disposal Area in Waukegan, Illinois. The primary purpose of the trip was to observe air monitoring stations set up to test for lead (Pb) levels on and off-site. There were seven stations on-site, plus an additional one on the north side of the plant that will be used to analyze for background levels. Also, there were two stations off-site set up in the backyards of homes belonging to residents that live in the area.

The contractors for Johns-Manville were scheduled to sample on three different days, for 24 hours. This was their last day. A set of water samples, in addition to the ones that were collected previously, will be analyzed to better define the water quality and groundwater flow direction in that area. The data has been scheduled to be submitted by September 15, 1985.

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V**

DATE: Request for Enforcement Support, Johns-Manville Site,
SUBJECT: Waukegan, Illinois

FROM: Rodney G. Gaither, RPM
Hazardous Waste Enforcement Branch

TO: Dr. Joseph Breen
Office of Toxic Substances (TS-798)

Per our conversation on August 7, 1985, this is a request for support from you regarding the Johns-Manville Waukegan Disposal Site. I would like for you to evaluate and send me your recommendations on the Final Remedial Investigation Report, Volumes I and II, that J-M sent U.S.EPA. In addition to providing me with airborne asbestos test, I would also like for you to evaluate and recommend a suitable way to address the issue on health and safety of the public on drinking liquids containing asbestos (re: Technical Memorandum on Analysis of Abestos in Water Samples). Under these tasks, I would like for you to review the existing information and specifically:

- ° Evaluate data on airborne asbestos.
- ° Evaluate the need for further remedial action at the site, based on the air asbestos test.
- ° Compare the airborne asbestos test to other reliable airborne asbestos tests that have been done before.
- ° Recommend how the airborne asbestos problem at this site can be better described in the Endangermant Assessment.
- ° Recommend how the asbestos problem in water samples can be better described in the Endangermant Assessment.

If it is at all possible, please review and submit comments as soon as you can.

If there are any questions, please contact me during the week of August 26, 1985. My telephone number is FTS 886-4745.

Attachments

bcc: R. Diefenbach

RGAITHER:CERCLA: sai (#3)

(8/7/85)

05 AUG 1985

SHE-12

VIA EXPRESS MAIL

Mr. Marvin Clumpus
Project Coordinator
Manville Service Corporation
P.O. Box 5108
Denver, Colorado 80217

Re: The Johns-Manville
Waukegan Disposal Site

Dear Mr. Clumpus:

The U.S. Environmental Protection Agency (U.S. EPA) has reviewed the Final Remedial Investigation Report (RI) and the Technical Memorandum #11-1 (Asbestos Analysis of Water Samples by Electron Microscopy) produced by Kumar Malnotra & Associates, Inc. for the John-Manville Disposal Area in Waukegan, Illinois.

The Final RI Report has been disapproved pending additional data and further consideration of the airborne asbestos testing. That data includes the following:

1. Additional groundwater analysis of common inorganic anions; and
2. On and off-site lead (Pb) levels in the air.

The time schedule for submission of the above mentioned has been set to start on July 29, 1985. The report incorporating the data should be submitted no later than September 15, 1985.

If there any comments or questions, please don't hesitate to contact me.

Sincerely,

Rodney G. Gaither
Remedial Project Manager

bcc: W. Diefenbach
R. Heuberger

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER SPECIFY:

TO: Rodney L. Daiter,
U.S. EPA

FROM: Marvin Clumpus,
Johns-Manville
(303) 975-2000

DATE 7-26-85
TIME 12:55 pm

SUBJECT

Johns-Manville Corp.

SUMMARY OF COMMUNICATION

Marvin returned my call to inform me that the PB monitoring for air and the additional water samples to be collected wouldn't start until Tuesday morning 7-30-85. He said Mike Debisk of T-177 should be there while the sampling is taking place. I told him I would be there Tuesday when the sampling activities would begin.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

Date: 6-14-85

Steve,

This is an additional report that Johns-Manville's contractor sent the Agency. I'm sending this information to keep you abreast of what's happening. If you have any questions, please feel free to contact me.

Sincerely,

Rodney L. Gaither, RPM

Date: 6-14-85

Davis,

This is an additional report

that Jinks - Manville is contractor and

the Agency. I'm sending this information

to keep you abreast of what's happening.

If you have any questions, please feel

free to contact me.

Sincerely,

Rodney B. Little

DATE: 16-11-15

John,

There is no additional document

that John-Michael is conducting art

the Agency. Please submit your comments,

if there is any needed, in your opinion,

please recommend this also if there are

any questions, please feel free to contact

me.

Sincerely,

Rodney D. Smith

Manville Says Three Insurers to Provide \$112 Million Toward Asbestos Claims

By JONATHAN DAIL

Staff Reporter of THE WALL STREET JOURNAL

Manville Corp. said three more insurers agreed to provide \$112 million toward settling asbestos-related claims against the company.

Manville currently has agreements with six insurers for a total of \$426 million for such claims. The Denver-based maker of building materials still is negotiating with 21 other insurance companies and expects to receive at least \$600 million eventually.

That amount, however, may not be enough to cover all claims against the former asbestos producer, attorneys for some claimants have said. Originally, the settlement fund was to be used only for health-related suits, but Manville conceded yesterday that some of the money may be used for other costs, including property-damage claims.

Lengthy Legal Dispute

Property-damage claims of more than \$1 billion have been filed against Manville so far. The company doesn't believe it or its insurers will be held liable for most of the property-damage claims, although lawyers for the claimants believe they will. The claims were made by property owners

who have or will have to remove asbestos from their buildings.

The settlement fund stems from a lengthy legal dispute between Manville and its insurers. Thousands of individuals have sued the company, claiming they contracted various respiratory diseases from exposure to Manville-made asbestos. The company contended that the insurers should pay the claims, but the insurers couldn't agree on their liability.

That prompted Manville to sue its insurers for \$5 billion in 1980. Two years later, Manville filed under Chapter 11 of the federal Bankruptcy Code, claiming it couldn't afford to pay all the health-related asbestos claims. The company currently is seeking to reorganize under Chapter 11, which protects a company from creditor lawsuits while it tries to work out a plan to pay its debts.

As part of its reorganization plan, Manville reached a \$314 million settlement with

three of its major insurance carriers last May. Yesterday, it said it signed a settlement for \$112 million with Insurance Co. of North America, Midland Insurance Co. and Allstate Insurance Co. The amount each insurer will pay wasn't disclosed.

The company's earlier agreement generated a controversy because of an unusual provision protecting insurers from future related legal costs. The accord also protects them from property-damage claims, a Manville official said yesterday. The official said it hasn't been decided whether funds from the second settlement will be allocated for property-damage claims as well.

Property-Damage Claims

The property-damage claims are being brought by government agencies, businesses and homeowners seeking to recover the costs of removing asbestos from buildings. Already, at least 3,500 such claims totaling more than \$1 billion have been filed.

Manville said it won't have to pay all those claims because the company wasn't the only asbestos producer. But attorneys for asbestos health victims say that if the company has to pay for even some of the

property-damage suits, then funds for health-related claims will be drained.

"It's like creating a pool of money for the victims, and then putting in some wells that pump it away from them," said Bertram Harnett, an attorney for a group of asbestos victims.

Mr. Harnett said Manville should recover from its insurers "something far in excess" of the \$600 million the company plans to receive.

Manville doesn't agree, however. "We only had so much insurance coverage, it wasn't unlimited," said Richard Von Wald, a vice president and corporate counsel for the company. "This was the fairest settlement we could get."

The dispute over the insurance settlements has stalled the company's bankruptcy-court proceedings for six months and is likely to delay it for several more months. Both settlements with the insurers are subject to the approval of bankruptcy-court Judge Burton Lifland. He twice postponed a hearing on the matter and is expected to schedule another one this spring.

In composite trading on the New York Stock Exchange yesterday, Manville closed at \$7.125, up 50 cents.

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
	(Record of item checked above)	
TO: Rodney B. Gaither U.S. EPA	FROM: John Diego PRC Engineering	DATE: 4/17/85 TIME: 4:28 pm
SUBJECT: John-Manville's draft LI Report		
SUMMARY OF COMMUNICATION <p>John said he would submit his comments on the draft LI report, on Thursday morning, 4/18/85. He said he still needed it typed and looked over by his superiors. I told John I would like to see the word "other" changed to "remaining" in describing what part, Intera, subcontractor to the PRC Engineering, would do.</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED		
INFORMATION COPIES TO:		

RECORD OF COMMUNICATION		<input type="checkbox"/> PHONE CALL <input checked="" type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE	
		<input type="checkbox"/> OTHER (SPECIFY) _____	
		(Record of item checked above)	
TO: Rodney S. Saithe U.S. EPA	FROM: John Diego PRC Engineering	DATE: 4/16/85 TIME: 4:15 pm	
SUBJECT: Johns-Manville Corp.			
SUMMARY OF COMMUNICATION <p>John gave me a typical memo responding to the Air asbestos test. He said there were typographical errors. A revised form should be here at U.S. EPA on 4/17/85.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED 			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
	(Record of item checked above)	
TO: Rodney L. Glathe U.S. EPA	FROM: Edward Lakonick PRC	DATE _____ TIME 4:05 PM
SUBJECT: Johns - Manville		
SUMMARY OF COMMUNICATION <p>Eds told me that he assigned the air asbestos review to John King of PRC. He said a subcontractor would ^{Eds said} review the Work Plans. The subcontractor is a firm by the name of <u>Interra</u>. Eds said someone would probably pick up the documents on Monday 3/25/85.</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED		
INFORMATION COPIES TO: _____		

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE	
		<input type="checkbox"/> OTHER (SPECIFY) _____	
		(Record of item checked above)	
TO: <i>Ed. De Domenico</i> <i>PRC 938-0300</i>		FROM: <i>Reynold E. Carlton</i> <i>U.S. EPA</i>	DATE: <i>3/27/77</i> TIME: <i>11:25 am</i>
SUBJECT: <i>Johns-Manville Co.</i>			
SUMMARY OF COMMUNICATION			
<p><i>Ed said he did begin the work acceptance for J-M. He said he would assign someone to the site. He said he would get back with me later. He also asked about how thick the RI was and what expertise capacity I needed the reviewer in during negotiations with J-M.</i></p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
(Remainder of form checked above)			
TO: Rodney L. Laitker U.S. EPA	FROM: Ron Lantry Intera Engineering	DATE: 5-21-85 TIME: 2:05 pm	
SUBJECT: Johns - Manville			
SUMMARY OF COMMUNICATION			
<p>Ron called and asked two things. The first, did U.S. EPA (myself) receive his report of the draft RI report regarding Johns-Manville, and the second, if U.S. EPA was arranging a meeting with J-M to discuss the RI report, and if so, did U.S. EPA need Intera's assistance.</p> <p>I told Ron that U.S. EPA did receive Intera's report and there was no need for Intera to prepare for a meeting in the near future with U.S. EPA and Johns-Manville.</p> <p>Ron said Intera would be in the process of relocating to Austin, Texas. They should be set up there around June 3 or 10th of 1985.</p> <p>I told Ron we would keep in touch.</p>			
INCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES 1:			

MAY 14 1985

MAY 14 1985

Mr. Rick Motini
California Department of Health Services
Toxic Substances Control Division
107 South Broadway
Room 7011
Los Angeles, California 90012

Re: Johns-Manville Sales Corporation

Dear Rick:

As you requested on May 13, 1985, I am forwarding to you a copy of the Consent Agreement that the U.S. Environmental Protection Agency (U.S.EPA) entered into with Johns-Manville Sales Corporation for the company's Waukegan, Illinois facility. The enclosed copy includes the attachments to the Agreement with the exception of two large maps which I was unable to photo-copy.

The Consent Agreement requires the company to conduct a Remedial Investigation/ Feasibility Study for the site. Johns-Manville has submitted a draft Remedial Investigation report to U.S.EPA, which is presently undergoing internal review. We anticipate providing comments on the draft report to Johns-Manville within the next two to three weeks. As I indicated during our telephone conversation, U.S.EPA's comments may be instructive to you. Therefore, I encourage you to call again to discuss the company's report once our comments are completed.

If I can be of further assistance to you please contact me at (312) 886-6733. Good luck with your endeavor.

Very truly yours,

Rabette J. Neuberger
Assistant Regional Counsel

Encl.

bcc: Rodney Gaither ✓

TO:
INFORMATION COPIES

CONCLUSIONS, ACTION TAKEN OR REQUIRED

Rick called to ask about the J-M site in Livermore. He, in relation to the site in California. He primarily wanted to know what J-M did in their clean-up operations. I told him J-M was placed on the NPL for more of their activities than for anything else. Rick wanted to know if he could get a copy of the Consent Order, that was signed after in June, 1984. I told him he would have to contact Bette Neale, attorney or the case for U.S. EPA, to request a copy. I told Rick it sounded to me as though he primarily wanted a guidance to follow in regarding as proceeding as clean-up decision for his case in California. He also wanted to see the draft RI report J-M's contractor submitted to U.S. EPA. I told Rick if he needs anything else specifically, just call me.

SUMMARY OF COMMUNICATION

SUBJECT Johns-Manville	
TO Rodney D. Bricker U.S. EPA	FROM Rick Johns Calif. Dept. of Health Services Attn: (213) 630-2310
DATE 5/13/85	TIME 11:45 AM
(Record of how (check one))	
<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	



217/782-6760

Refer to: L09719014 -- Lake County
Waukegan/Johns-Manville
SF/Technical

May 6, 1985

Rodney Gaither
U.S. Environmental Protection Agency
Region V, CERCLA A Enforcement Section
230 South Dearborn Street
Chicago, Illinois 60604

Dear Mr. Gaither:

Thank you for forwarding the Draft Remedial Investigation (RI) for the subject facility. I have reviewed the document and attached to this letter please find my comments.

Although not a party to the Order By Consent, IEPA is interested in maintaining a review and comment ability on this project. I appreciate being continued to be informed regarding project activities.

If you have any questions or comments, please contact me at the number indicated above.

Sincerely,

Steven K. Dunn
Remedial Response Unit
Hazardous Substance Control Section
Division of Land Pollution Control

SKD:bls/0955E,48

Attachment

cc: Bob Cowles, W/A
Don Gimbel, Enforcement W/A
Maywood Regional Office
File



Comments on Draft FI
Report for Johns-Manville

1. The RI presents data for air monitoring which is in apparent conflict with monitoring performed in April, 1982. No discussion of the 1982 data nor monitoring previously performed by Johns-Manville is included in the RI. There is no discussion of possible causes for the apparent conflict in data. This should be addressed.
2. The RI proposes that a large proportion of leachate from the disposal area lagoons serves as recharge for the industrial canal. If this is true, the adequacy of Wells 2, 3 and 4 reflecting actual groundwater quality is questionable. The pumping of water from the industrial canal could be exercising a hydraulic gradient influence on groundwater at the site. The contour maps in the report, developed from groundwater levels, may or may not be indicative of actual groundwater flow.

To lend support to this concern, Well 4 could be expected to have the highest level of contaminants based on contoured groundwater flow and well location. However, of Wells 2, 3, and 4, Well 4 shows the lowest concentration of contaminants. It is possible that this is due to groundwater flow from the lake into the industrial canal. Similarly, Well 2 which is farthest away from the industrial canal shows the highest contaminant levels.

The RI does not consider groundwater mounding as a result of the lagoons. Groundwater movement may not be as described in the report.

3. The RI assumes continued operation of the facility. This assumption is important for two reasons:
 - a. With respect to comment 2., in what manner would groundwater movement and quality be influenced by facility closure?
 - b. To what extent does wastewater currently affect ambient pH levels? If operations were ceased would the pH be significantly lowered, possibly freeing lead at the site or is pH determined more by the nature of solid materials disposed at the site?
4. IEPA is particularly concerned with the non-disclosure statement in the RI.

IEPA sees no authority for this statement and requests that this document not only be released, but that the public be notified of its existence. IEPA also requests a public hearing be held before approval of the RI.
5. Although outside the context of USEPA-CERCLA actions, IEPA wishes to reiterate its determination that a permit under the terms of Title 35 Part 802 is required for this facility.

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
	(Record of item checked above)	
TO: Kumar Malhotra Contractor for J-M	FROM: Rodney L. Keith U.S. EPA	DATE: 4/23/85 TIME: 3:00 p.m.
SUBJECT: Draft RI report on Johns - Manville		
SUMMARY OF COMMUNICATION <p>I called Kumar for two reasons. First, to inform him that I couldn't come out to the J-M site to watch him take samples. This is the wrong stage of the process to look at additional data that hasn't been submitted. Second, to ask Kumar if there's data relating to the water elevation in the heated water canal from the utility plant, south of J-M, to the plant itself. No data was provided. Kumar said he plotted the temperature from the water wells. That he said, would confirm the groundwater direction and movement. Kumar said he would need more well data for further information. He said he knew the temperature decreased, flowing from north to south. He said if he wanted to know the localized water condition, depending on the remedial action taken, he could.</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED <p>place pump wells. In conclusion, Kumar didn't know the water elevation nor have any</p>		
INFORMATION COPIES TO:		

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE	
		<input type="checkbox"/> OTHER (SPECIFY) _____	
		(Record of item checked above)	
TO: Steve Dunn IEPA	FROM: Rodney D. Baithen U.S. EPA	DATE: 4/19/85 TIME: 1:11 pm	
SUBJECT: U.S. Ecology and Johns-Manville			
SUMMARY OF COMMUNICATION			
<p>I told Steve that the last scopes of work, ("SOW") that he sent me met my approval. He said he had to send a copy to Tom Mater for a formal approval. Steve also said the State will send a Consent 106 Order to U.S. Ecology the week of 4/22/85.</p> <p>Next, Steve asked me what was going on with Johns-Manville. I told Steve I was working on the draft RI report concurrently with my other projects. I said that PRC Engineering did the air asbestos part, and it was already submitted to U.S. EPA. I also told Steve, Intera, subcontractor to PRC Engineering, would submit the remaining parts by 4/25/85. Steve was informed that there probably would be an in-house discussion concerning the draft RI report. Later, there would be a meeting set up with J-M to discuss the draft RI report.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES			
TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
		<small>(Record of item checked above)</small>	
TO: Rodney D. Baither U.S. EPA	FROM: Kumar Malhotra J-M contractor	DATE 4/18/85 TIME 7:20 pm	
SUBJECT Johns-Manville Corp.			
SUMMARY OF COMMUNICATION <p> Kumar called to see if I could tell him what's going on with the draft RI report. He wanted to know what I thought about it. I told Kumar I couldn't disclose any information to him at this time. Kumar wanted to know if anyone from the Agency could go out to the plant in Waukegan to watch him take some groundwater samples. I told him I would have to contact the attorney first, and return his call. Kumar said he had some groundwater samples analyzed already. To his dismay, he didn't like what what he saw. I asked what he saw wrong with them. He replied some were too high and other too low with asbestos. He said the blank samples showed a high level of asbestos content. Kumar will: 1) Pump and flush wells on 4/29/85, 2) </p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED <p> Take samples out of wells on 4/30/85. </p>			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO: Rodney G. Gaither U.S. EPA	FROM: John Dirgo PRC Engineering	DATE: 4/15/85 TIME: 7:40 pm	
SUBJECT: Johns - Manville			
SUMMARY OF COMMUNICATION: <p>John called and said the Air report, due 4/15/85, wouldn't be finished until 4/16/85. He said the report had to be typed. John related the following:</p> <ul style="list-style-type: none"> ◦ Levels of asbestos^{on-site} were measured, at a higher value than off-site. ◦ Significant contamination of asbestos was on blank filters. ◦ Fibers may not be uniformly distributed. ◦ Blank samples had higher values (No^{ts}) than off-site samples. <p>John also said, reading the Consent Order, the Pb concentration in the air should possibly be measured.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO: John Diigo 938-0300 PRC Engineering Ext 292		FROM: Rodney G. Waither U.S. EPA	DATE 4/4/85 TIME 2:55 pm
SUBJECT John - Manville			
SUMMARY OF COMMUNICATION <p>John wanted to know about the documents under the "Work To Be Performed" section. I told John that all the documents except for the first <u>Water Balance Study</u> report was included in the draft RI report. He said he would pick it up on 4/5/85 in the morning. He also said he would return some copies of the documents (original) that I supplied to him at an earlier date. John assigned a subcontractor to review everything except the <u>Air</u> test. I told John to review and submit the Air report as soon as he finished it. John committed to try and have that report done by for April 15, 1985. He said he just submitted the report to his subcontractor on April 3, 1985. That report may not be submitted until April 25, 1985.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED 			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
(Record of item checked above)			
TO: Louis Vasseur City of Waukegan 249-5410	FROM: Rodney G. Baither U.S. EPA	DATE 4/2/85	TIME 9:20 AM
SUBJECT John-Manville			
SUMMARY OF COMMUNICATION <p style="margin-top: 10px;"> Louis just wanted to repeat telling me about transit pipe floating down the lake from the plant. Also, there's litter blowing south of the area. Several fires have been reported to be on site by, Fire Chief, Hugh White. The last being reported in November of '84. Louis said there's no good communication between him and staff people of John-Manville. He did receive the draft RI report I sent him. He said he would send his comments. I told Louis to call if anything else occurred. </p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO:	Jim Whipple Manville 303/978-3750	FROM:	Rodney B. Guther U.S. EPA
		DATE	1-17-85
		TIME	7:30 AM
SUBJECT Johns-Manville			
SUMMARY OF COMMUNICATION			
<p>Jim was requested to have Manville's contractor (Kumar) send U.S. EPA five copies of the technical memorandums for groundwater and soil sampling results. Jim also was requested to send a notice to Valdas V. Adamkus (RA) regarding an extension of time on the RI report.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES			
TO:			

*Rodney G. Gaither* Memorandum

Date December 3, 1982

From Chief, Superfund Implementation Group

Subject Review of Data, Manville Site, Waukegan, IL

To Peter McCumiskey
Public Health Advisor
EPA Region 5

10 DEC 1982

KAMP
Review

As requested, the data you submitted concerning the above site has been reviewed by the Centers for Disease Control. I regret the delay in responding, but felt that it was necessary in order for the information to be reviewed by two established experts in the field of asbestos sampling, analysis, and interpretation.

It was the conclusion of the reviewers that, due to less than optimum sampling and analytical techniques, the degree of health risk from this site cannot be estimated with any certainty. There is, of course, the possibility that such a risk is present since asbestos fibers are apparently being released from the site. Therefore, in view of the well-documented health effects of this substance, collection of data that would allow a better estimation of risk to be made would be useful, and should be done if feasible within budgetary and technical constraints.

Specific comments of the reviewers follow:

"The type of sample collection was inappropriate for asbestos (any fibers). Using a Sierra/Anderson Virtual Impractor has no useful purpose in fiber collection, especially when fibers are going to be sized by electron microscopy. Total dust sample collection would have been the preferred method.

"Sample flow rates were too low for ambient air collection. Due to the sample device used, they were limited to 15.0 lpm. With a total dust sample a much broader range of flow rates could have been used.

"Analysis by electron microscopy (EM) has not been standardized. Techniques such as type of filter, sample preparation methods, type of EM analysis, etc., vary depending on where the sample is collected (i.e. water, air) and the intended purpose of the collection (i.e. fiber concentration, fiber identification, fiber sizing). The method used in the study is one approach that is often used. However, there are some potential problems with the method. First, the cellulose filter used in

Page 2 to Peter McCumiskey

collection needs to be ashed to remove organic material. It is then mixed with a dispersion solution and filtered through a nucleopore filter. During this process there is a potential for breaking fibers, thus increasing fiber counts/concentration; and losing some of the sample (fibers) during ashing and transfer of the material to the other filter type (nucleopore).

"In my opinion, this method is not the most accurate for determining fiber concentration. As you would suspect, I would recommend the method (or a similar one) outlined in the NIOSH Technical Report: "Review and Evaluation of Analytical Methods for Environmental Studies of Fibrous Particulate Exposures" written by Zumwalde and Dement.

"Other problems with the analysis include:

mag. was 10,000X
"Minimum magnification for asbestos fiber sizing should be 10,000X (not 2,000X as preformed in study).

fibers were identified
"No discussion was given as to the identification of the fibers. They are probably correct in that the fibers at Johns Manville waste site were chrysotile, however, they should have performed some type of analysis to confirm this assumption. I would recommend using transmission electron microscopy and identify individual fibers by selected area electron diffraction and energy dispersive X-ray analysis."

I hope these comments are useful. If we can be of further help to you, please do not hesitate to let us know.


Georgi A. Jones

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
(Record of item checked above)			
TO: Rodney G. Haithen U.S. EPA	FROM: Louis Vasseur City of Waukegan	DATE: 3-27-85	TIME: 10:05 am
SUBJECT: Johns - Manville			
SUMMARY OF COMMUNICATION			
<p>Louis Vasseur who works for the City of Waukegan (Environmental Officer) called and said that he had complaints from citizens about pipes and some type of debris floating in the lake around that area toward their land. He said he wanted a copy of the draft LI report. He also wanted to know the status of the site. I told him I would send a copy of the report and told him that I would probably submit the comments ^(to J-M) I had along with the comments of our contractor's comments, who are also reviewing the site. Louis said he was leaving for Washington D.C. this afternoon to meet with such people as Dixon, Simon, and other notables to discuss this site. I told Louis this was the first time I had ever had of citizens complaining about the Johns-Manville site.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
<p>The comments I told Louis would probably be submitted to Johns-Manville around the last of April 85' or the beginning of May 85'. I told Louis J-M had two weeks to respond to those comments.</p>			
INFORMATION COPIES			
TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
		(Record of item checked above)	
TO: Kumar (616) 361-5092		FROM: Rodney G. Saitler U.S. EPA	DATE 2-14-85 TIME 3:30 pm
SUBJECT: Johns - Manville			
SUMMARY OF COMMUNICATION <p>Kumar said that he hasn't been able to send anything. He also wanted to know if there was any state's results concerning surface water contamination. I told him I would look to see if there were any. Kumar stated that the surface water issue wasn't in the Consent Order, but just wanted to see the results so he could possibly submit something in relevance to it in the draft RI report. Kumar said he would submit all documents in a few weeks pertaining to everything.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO: Mark COC		FROM: Rodney D. Gaither ^{U.S. EPA} Louise Fabinski COC	DATE: 1-23-85 TIME: 2:10 pm
SUBJECT: Johno-Manville			
SUMMARY OF COMMUNICATION			
<p>Mark, Louise, and myself discussed what I felt about the sampling results and the sampling procedures that took place at J-M site. I told Mark I was concerned about the lead concentration and the asbestos conc. and procedures that were used to test the asbestos in the air and soil, mostly in the air. We also discussed the contractor's (Kumar) QAPP in general. Mark said the high lead conc. in the soil didn't appear to be of extreme concern since the site is bounded by a fence, its not easily accessible to people. Mark said a possible concern about the sludge trench near the fence may want to be addressed. Further discussion may take place in the future concerning the site.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO: Rodney L. Gaither U.S. EPA	FROM: Kumar Malhotra KMA Labs.	DATE 1-23-85 TIME 3:38 pm	
SUBJECT: Johns-Manville			
SUMMARY OF COMMUNICATION <p>Kumar called me concerning the J-M site. I told him I needed the technical memorandum reports that are mentioned in the Consent decree. The memorandums consisted of groundwater and soil sampling analysis programs. Kumar said he would submit them. He also wanted to know about other "Endangerment Assessments" some other RPM's had done. I told him I didn't know anything about them. Kumar and I mentioned we would discuss the possible outcome of the sludge pit and what the possibilities would be to cover it up or not. I told him I talked to reps. from CDC.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSS <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
		(Record of item checked above)	
TO: Bill Mains	FROM: Kumar Malhotra BMA Inc	DATE: 10/4/84	TIME: 11 am
SUBJECT: Completion and Delivery of The J-M RI workplan for hydrogea			
SUMMARY OF COMMUNICATION: <p>Malhotra was concerned about getting Moser satisfied. He committed to getting The revised draft work plan out by the 10/10/84, so long as he can get the rest of the info from the laboratory. He offered to fly the info in on Friday on a unfinished form, which I did not consider necessary at all.</p> <p>He will also, besides mailing the revised draft to the office, mail a copy to a friend of mine's address in Duluth where I will be on 10/17, so that I will have an opportunity to review it sooner.</p> <p>This schedule is better than no schedule at all. It at least gives an expectation of receiving a product.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED: <p>I called Moser to inform him that this latest plan of action was acceptable to me.</p>			
INFORMATION COPIES TO: BN			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSS <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)			
		(Record of item checked above)			
TO: Bill Mains	FROM: Sam Whipple } J-M Steve Moser } Denver			DATE 10/4/84 TIME 10 am	
SUBJECT Mains 9/21 and Nankerson 10/1 letters concerning the lack of a QAPP for J-M					
SUMMARY OF COMMUNICATION					
<p>Whipple and Moser were calling to find out what we were talking about. Apparently my previous conversations with Whipple and the 9/21 letter to Chet Nankerson had not made any impression, but a call to them from Louisa got their attention.</p> <p>Whipple and Moser had apparently been misled by their contractor who was telling them everything was taken care of - had been done verbally with me - no further submission was necessary. I informed them that the only communication I had had with the laboratory was one short call on whether I would require dewatered (H_2) spikes or not (I don't).</p> <p>There followed some semi-technical questions about what is a holding time and what aspects of a QAPP can affect data acceptability. Also, I reiterated that as far as I was concerned I did not yet have a revised submission workplan following the August meeting in Waukegan and my review of new material given to me at that meeting.</p>					
CONCLUSIONS, ACTION TAKEN OR REQUIRED					
<p>Whipple and Moser are going to check things out from their end in an attempt to get a better handle on what is going on. They will get back today or Friday.</p>					
INFORMATION COPIES					
TO: BN					

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSS <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
		(Record of item checked above)	
TO: Jim Whipple Manville/Denver	FROM: 	DATE 7/26/84	TIME _____
SUBJECT KMA INC Workplan under 106 order			
SUMMARY OF COMMUNICATION <p>Jim had no problems with The workplan - it was still being reviewed by the Manville Health & Safety people. He did not think they would have too many comments.</p> <p>Whipple said he would have KMA send me 3 copies of the work plan</p> <p>Whipple going on vacation July 27 - Aug 12</p> <p>We discussed air sampling and the subject of the air study came up. I informed Jim that some form of paper work would have to be forthcoming even if Manville intended to do that work using their Health & Safety Department. He understood, but that was an area out of his control - i.e. a new Manville contract would be required for that</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED <p>1st phase of the required work. I told him: we could wait until he got back to determine where to proceed on the air study.</p> <p>EPA will connect on KMA plan to Manville & KMA will have final plan for kick off meeting at the plant (maybe week of Aug 13)</p>			
INFORMATION COPIES TO: _____			

Manville Service Corporation
Ken-Caryl Ranch POB 5108
Denver, Colorado 80217
303 978-2000

Manville

August 20, 1984

Basil G. Constantelos
Director, Waste Management Division
U. S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, IL 60604

Re: Johns-Manville Disposal Area RI/FS

Dear Mr. Constantelos:

Pursuant to Article VIII of the Administrative Order by Consent ("Consent Order") entered into between Johns-Manville Sales Corporation ("J-M") and the United States Environmental Protection Agency ("USEPA"), I have been designated as the J-M Project Coordinator. Therefore, all major communications concerning the implementation and status of the Consent Order should be directed initially to me as follows:

K. (Chet) Nerheim
Manville Service Corporation
P. O. Box 5108
Denver, Colorado 80217
(303) 978-3929

Because of the complexity and technical nature of the Consent Order, I have designated several "Alternate Project Coordinators" with primary areas of responsibility, as follows:

Stephen V. Moser (Overall)
Manville Service Corporation
P. O. Box 5723
Denver, Colorado 80217
(303) 978-2672

James H. Whipple (RI/FS: Soil and Groundwater)
Manville Service Corporation
P. O. Box 5108
Denver, CO 80217
(303) 978-3750

Dr. James P. Leineweber (RI/FS: Air)
Manville Service Corporation
P. O. Box 5108
Denver, CO 80217
(303) 978-3118

Basil G. Constantelos
August 20, 1984
Page Two

Michael Debish (On-Site Coordinator)
Johns-Manville Sales Corporation
P. O. Box 228
Waukegan, IL 60087
(312) 623-2900

Richard Jonas (Alternate On-Site Coordinator)
Johns-Manville Sales Corporation
P. O. Box 228
Waukegan, IL 60087
(312) 623-2900

These individuals should be contacted in my absence or where the communications involve technical or minor matters within their respective areas of responsibility.

I am committed to frequent and open communications with your agency during the pendency of the Consent Order and trust that you are as well. We are determined to implement the terms of the order as smoothly and efficiently as possible. We look forward to your cooperation and assistance in this effort.

Sincerely,



K. (Chet) Nerheim
Manager, Assets Recovery

Manville Service Corporation
Ken-Caryl Ranch
Denver, Colorado 80217
303 978-2000

Manville

April 6, 1984

exhibit 2

United States Environmental Protection Agency
Region 5
230 South Dearborn Street
Chicago, Illinois 60604

Attention: Norman Niedergang, P.E.

Reference: Supplemental General Conditions and Specifications
Geotechnical and Hydrological Investigation
Waste Disposal Site Study
Waukegan Illinois Plant
Project S94-3224

Dear Mr. Niedergang:

This letter is to advise you of the additions, deletions, and/or revisions made to the above referenced document as compared to the submittal dated March 23, 1984. Since this document will be used in the bid package, we are submitting the above referenced document as a unit for your review.

The changes are as follows:

Supplemental General Conditions

Paragraph	Remarks
4.2	Revised heading to Start <u>Contract</u> Work.

Specifications

Paragraph	Remarks
1.3.4	Relocated and renumbered para. 1.4.2.
9.1.3	Revised paragraph - deleted statements reference to soil borings through waste fill material into underlying natural soils.
9.1.4	Added statement to end of paragraph.
9.4.1, 9.4.2	New sub-paragraphs.

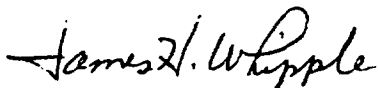
Specifications (continued)

9.4.3	Renumbered sub-paragraph and revised statement.
9.4.4	Completely revised sub-paragraph.
9.4.5	Renumbered sub-paragraph, revised first sentence and quantities listed.
10.2	Deleted last sentence.
10.2.1	Completely revised sub-paragraph.
10.2.2	Revised statement.
10.4.3	Deleted previous sub-paragraph. Renumbered para. 10.4.4 and revised both sentences.
10.4.4 thru 10.4.5	Renumbered sub-paragraphs.
10.6.1	Revised quantities listed and added last sentence.
10.6.2	Deleted previous sub-paragraph.
10.6.2 thru 10.6.4	Renumbered sub-paragraphs.
11.4.1	Revised sub-paragraph.
11.4.2	Deleted previous sub-paragraph.
11.4.2, 11.4.3	Renumbered sub-paragraphs.

Drawings

Dwg. No.	Remarks
36121-4	Deleted disposal on-site ground water monitoring well south of sludge disposal pit.
36122-4	Relocated three east-west soil boring sites back into the disposal pit areas.

Very truly yours,



James H. Whipple, P.E.
Sr. Staff Engineer

April 6, 1984
Project S94-3224
Page 3

Distribution:

D. Favero	Ill.EPA, Springfield	separate letter w/enclosure
C. Bowers	1-01	w/o enclosure
D. Burford	1-06	w/enclosure
J. Crawford	2-09	w/enclosure
C. Lown	SHW, Chicago	w/enclosure
S. Moser	2-16	w/enclosure
L. Mutaw	Waukegan	w/o enclosure
C. Nerheim	3-27	w/o enclosure
S. Ng	3-25	w/o enclosure
J. Scott	Waukegan	w/enclosure
T. Van der Veer	3-26	w/o enclosure

Central File S94-3224

Enclosure:

Suppl. Gen. Cond's and Spec's dated April 6, 1984 w/attachments:
Tables 1 & 2, Inorganic & Organic Analysis Data Sheets.
Proposed Groundwater Monitoring Well Details.
Drawings No. 36121-4 & 36122-4

0355k

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A Partnership Including Professional Corporations

7200 Sears Tower, Chicago, Illinois 60606
Telephone (312) 876-1000 Twx 910-221-2463

WASHINGTON OFFICE:

1101 Connecticut Avenue, N.W., Washington, D.C. 20036
Telephone (202) 857-0600 Telex SHW 64590

January 18, 1985

BY MESSENGER

Regional Administrator,
Region V
United States Environmental
Protection Agency
c/o Babette J. Neuberger, Esq.
230 South Dearborn Street
16th Floor
Chicago, Illinois 60604

Re: Johns-Manville Sales Corp., Waukegan,
Illinois Administrative Order By
Consent, EPA Docket No. V-W-106-5

Dear Sir:

On January 11, 1985, various representatives of the United States Environmental Protection Agency ("USEPA") and Johns-Manville Sales Corporation ("Johns-Manville") met to discuss the preparation of the Remedial Investigation Report which is required by the above-captioned Administrative Order By Consent. That Order requires Johns-Manville to submit a Remedial Investigation Report to USEPA within 180 days of the effective date of the Administrative Order By Consent. When this schedule for submission was agreed to, Johns-Manville hoped, with some reservations about what the actual experience would prove to be in the matter, that 180 days would be sufficient for the task. Actual experience at the Waukegan site has proven that 180 days is not long enough, as was discussed at the January 11th meeting. Johns-Manville now finds that additional time will be required in order to prepare a Remedial Investigation Report which will provide meaningful information about the site and will answer the questions which were raised by USEPA at the January 11th meeting about the preliminary results obtained from the remedial investigation work that has been done.

To accommodate these needs, Johns-Manville requested at the January 11th meeting, and now reiterates the request in this letter, that the deadline for submission of the Remedial Investigation Report be extended as follows: a preliminary draft of the Remedial Investigation Report will be submitted by March 4, 1985 to USEPA for preliminary comment and a final

RECEIVED
HWEB JAN 21 1985
Remedial Response
Section II

SCHIFF HARDIN & WAITE

Regional Administrator
January 18, 1985
Page Two

draft of the Remedial Investigation Report will be submitted by March 4, 1985 to USEPA for preliminary comment and a final draft of the Remedial Investigation will be submitted to USEPA two weeks after Johns-Manville has received USEPA's preliminary comments on the preliminary draft of the Remedial Investigation Report. Johns-Manville hopes that such a revised schedule for submission, which provides for an "interim date" as well as a final date, will meet the needs of both USEPA and Johns-Manville with respect to the required Remedial Investigation Report.

If this revised schedule is acceptable to USEPA, Johns-Manville suggests that it be memorialized as a brief addendum to the Administrative Order By Consent.

Given the time remaining for submission of the Remedial Investigation Report under the Administrative Order By Consent as it is presently drafted, your prompt attention to this request will be greatly appreciated.

Sincerely,



Carolyn A. Lown

CAL/jm

cc: Mr. Basil G. Constantelos
Mr. Rodney Gaither
Stephen V. Moser, Esq.

ATTACHEE LIST 1-11-85

NAME	ORGANIZATION	TELEPHONE #
Carolyn A. Howell	SCOTT AND BROTHERS	876-1000
JAMES H SCOTT	MANVILLE WALKER	623-2500
J.T. Ryan	MANVILLE WALKER	"
M. DEBISH	"	"
Stephen J Moser	MANVILLE, DENVER	(303) 978-2672
Earl Winkum	"	303-978-3929
Beth Mullins	U.S. EPA	312-8867-33
David D Gimbel	IEQA	312-345-9780
James H. Whipple	Manville Denver	(303) 978-3750
Steven K. Dunn	EPA - CERCLA	217/782-6766
Eddy Lin	EPA -	312/345-9780
Mich Leah	IEPA	"
S.K. MATHOTA	KMA, INC	616/3615092
RICK DOWNS	MANVILLE WALKER	312-623-2500
Wm Munn	US EPA	312-886-4100
David R. Burford	Manville	303-978-3111
Rodney G. Gaither	U.S. EPA	312/886-4735

K. (Chet) Nerheim, Manager
Assets Recovery and Project Coordinator
Manville Service Corporation
P.O. Box 5108
Denver, Colorado 80217

Dear Mr. Nerheim:

This letter is to inform you that I approve the Work-Plan for Geotechnical and Hydrogeological Investigations produced by KMA, Incorporated, including the January, 1984, CAL, Incorporated, Quality Assurance Manual with the October 4, 1984, Supplement. The one condition to this approval is that the Remedial Investigation Report is to contain, in an appendix, the raw data from the sample analysis runs ~~for~~ chromium, cadmium, selenium, and sulfide. Include there also the GC/MS outputs for a sample containing detectable contamination. In the event no detections were ever made, substitute an example no-detect run.

Johns-Manville Sales Corporation has now completed Section 1.2.1 of Exhibit 2 of the consent order between Johns-Manville Sales Corporation and U.S. EPA. I appreciate your efforts toward our goal.

Sincerely yours,



William D. Mains
Remedial Site Project Manager

cc: KMA, Inc ✓
Sabbette Hawberger SC

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO:	Michael Debish (312) 623-2900	FROM:	Johns-Manville (Waukegan)
		DATE	10-18-84
		TIME	8:05 AM
SUBJECT Air Monitoring at Johns-Manville Site			
SUMMARY OF COMMUNICATION			
<p>Michael Debish was phoned to confirm air monitoring was cancelled because of bad weather (rain). Mike also indicated that the Ontario Research crew were thinking about bypassing the Pretesting stage. Mike said since the crew felt that there hadn't been any signs of dump trucks or other things that would greatly contribute to any air contamination problems, a pre-test might not be necessary. Mike would like the U.S. EPA's recommendations. I told him I would look into the matter. Mike said the Research crew would like to skip the pre-test and go straight to the testing with the maximum air testing.</p> <p style="text-align: right;">Rodney G. Gaither</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES			
TO:			

Mail
Code

To

Date

4/6/84

From

5RA-14	OFC OF REGIONAL ADMINISTRATOR	
5GL	OFC OF GREAT LAKES NAT'L PROG	
5PA-14	OFC OF PUBLIC AFFAIRS	
5PL-14	Library	
5C-16	OFC REGIONAL COUNSEL	
5CA-16	Air Branch	
5CHW-16	Solid Waste & Emergency Response Branch	
5CWGTG-16	Water Toxics and General Law Branch	
5A-26	AIR MANAGEMENT DIVISION	
5A-26	Air and Radiation Branch	
5A-26	Technical Analysis Section	
5A-26	Regulatory Analysis Section	
5A-26	Air Planning Section	
5AC-26	Air Compliance Branch	
5AC-26	Engineering Section I	
5AC-26	Engineering Section II	
5S	ENVIRONMENTAL SERVICES DIVISION	
5CRL	Central Regional Laboratory	
5SEM	Environmental Monitoring Branch	
5SOA	Quality Assurance Office	
5SCDO	Central District Office	
5SEDO	Eastern District Office-Ohio	
5SEGI	Grosse Ile, Michigan Office	
5M-14	PLANNING AND MANAGEMENT DIVISION	
5ME-14	Environmental Review Branch	
5MF-14	Financial Management Branch	
5MFG-14	Grants Management Section	
5MS-14	Management Services Branch	
5MSA-14	Administrative Mgmt Section	
5MSO-14	OFC Services Unit/Mail Room	
5MSD-11	Data Management Section	
5MSG-11	Graphic Arts	
5MP-14	Personnel Branch	
5MA-14	Planning & Analysis Branch	
5H-13	WASTE MANAGEMENT DIVISION	
5HR-13	Remedial Response Branch	
5HT-11	Toxics Materials Branch	
5HW-13	Waste Management Branch	
5W-11	WATER DIVISION	
5WD-12	Drinking/Groundwater Prot. Br.	
5WF-12	Municipal Facilities Branch	
5WFI-12	Environmental Impact Section	
5WFP-12	Facilities Planning Section	
5WFE-12	Municipal Engineering Section	
5WFM-12	Program Management Section	
5WQ-11	Water Quality Branch	
5WQC-11	Compliance Section	
5WQD-11	Dredge & Fill Section	
5WQP-11	Permits Section	
5WQS-11	Planning & Standards Section	
5CCI-4	OFC OF CRIMINAL ENFORCEMENT	
	OFC OF INSPECTOR GENERAL/AUDIT	

Info ☐ Per Telecon ☐ Comment ☐
Comment ☐ Action ☐

REMARKS (See Below or Reverse)

1 Niedergang

APR 4 1984

William E. Blakney
Assistant Attorney General
Environmental Control Division
160 North LaSalle Street
Suite 900
Chicago, Illinois 60601

Re: Johns-Manville Sales Corporation
Waukegan, Illinois

Dear Bill:

As you are aware, since September, 1983, this office has been negotiating with Johns-Manville Sales Corporation to achieve a private party investigation and cleanup of the company's asbestos contaminated facility in Waukegan, Illinois.

Negotiations with the company are proceeding forthrightly. I expect to be in a position to enter a signed Administrative Consent Order with the company pursuant to Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) within the next two to three weeks. I am concerned, however, that the company will refuse to sign the Administrative Order with our Agency unless the State of Illinois is prepared to settle at the same time.

As you will recall, at the outset of negotiations, Ms. Carolyn Lown, the attorney for Johns-Manville Sales Corporation, stated that the company would not settle with the State or Federal Agency alone without receiving a concomitant "release" from the other Agency. Thereafter, you, Don Gimbel and I made great efforts to coordinate our respective positions while negotiating with the company. During this period, I understood that you would be developing a state consent decree which parallels the federal administrative order and tracks the "release" language in the federal document. To date, I have not received a draft of the the State's consent decree; nor has a document been submitted to the company for discussion.

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7200 Sears Tower, Chicago, Illinois 60606
Telephone (312) 876-1000 Twx 910-221-2463

WASHINGTON OFFICE:

1101 Connecticut Avenue, N.W., Washington, D.C. 20036
Telephone (202) 857-0600 Telex SHW 64590

April 4, 1984

BY MESSENGER

Babette J. Neuberger, Esq.
Assistant Regional Counsel
Solid Waste & Emergency Response Branch
United States Environmental Protection
Agency
Region U
230 South Dearborn Street
16th Floor
Chicago, Illinois 60604

Re: Johns-Manville Sales Corporation,
Waukegan, Illinois

Dear Babette:

Enclosed is another draft of the Administrative Order by Consent. This copy reflects the changes which you and I and Steve Moser discussed yesterday. For ease of reference, additions are underlined and deletions are shown in brackets.

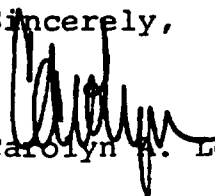
In addition to the changes reflected in the enclosed draft, Steve and I would like to make the following additional changes to the document:

1. We would like to add the phrase "or otherwise expressly reserved herein" to the end of the first sentence of paragraph V(C)(7).

2. We would like to change the citation "40 C.F.R. § 300.68(a) through (j) (1983)" which appears in paragraph XIV to the citation "40 C.F.R. Part 300," as 40 C.F.R. § 300.68(a) through (j) references other portions of 40 C.F.R. Part 300.

I look forward to your response to the enclosed.

Sincerely,


Carolyn A. Lown

CAL/jm
Encl.

cc: Stephen V. Moser, Esq. (w/encl.)



• ENGINEERS • CONSULTANTS • PLANNERS •

Rod-

Your copy, *[Signature]*

KUMAR MALI MOTRA & ASSOCIATES, INC.

3000 East Belt Line N.E.
Grand Rapids, Michigan 49505
Telephone (616) 361-5092

October 12, 1984

William D. Mains
On-Scene Coordinator
U.S.E.P.A., Region 5
230 South Dearborn Street
Chicago, Illinois 60604

Reference: Waste Disposal Site
Johns-Manville, Waukegan, Illinois

Dear Mr. Mains:

First of all I must thank you for your assistance to KMA's staff during the field investigations. This letter is in response to your review/comments on the draft work plan for field investigations at the above referenced site. This response covers comments made in the August 22, 1984 work plan review meeting at Waukegan, Illinois as well as those addressed in your September 1984 letter to James H. Whipple of Manville Service Corporation.

Responses to all of the comments and suggestions made during the August 22, 1984 meeting have been incorporated in the work plan and copies of the revised work plan are enclosed for your review and approval. As you are aware from your site inspections that various procedures and precautions listed in the work plan were followed during field investigations.

A summary of procedures actually used in the field will be presented in the Investigations Report.

A response to your comments in September 1984 letter is presented in the enclosed supplement to the Quality Assurance Manual submitted to you during the August 22, 1984 meeting. This supplement addresses each of the sections outlined in your September, 1984 letter except section 5.10. Data reduction methods will be discussed in the Remedial Investigation (RI) Report as specified in the work plan. Methods to identify and treat outliers is presented in Section 7 of the Canton Laboratory Quality Assurance Manual. However a brief summary of methods used will be included in the RI Report.

Please feel free to contact me if you have any questions on the enclosed information.

Sincerely yours,

[Signature]

S.K. Malhotra, Ph.D., P.E.
Project Manager

Enclosure
cc: J.H. Whipple
SKM:cw

5/22/84

James H. Whipple
Senior Staff Engineer
Manville Service Corporation
P.O. Box 5108
Denver, CO 80217

This letter is to inform you of modifications required for approval of the Geotechnical and Hydrological Investigation Specifications proposed for the remedial investigation at the Waukegan disposal site. The Supplemental General Condition section, while useful in your contracting actions, will not be required as part of the consent order. As a result, some modifications simply remove reference to that section. The remainder of the modifications alter some wordings, and add making a potentiometric ground water map part of the monitoring well construction activity.

The modifications are as follows:

<u>reference</u>	<u>action</u>
1.1.1	remove "see Supplemental General....."
3.3.4	remove "Supplemental General Conditions.... page SGC-5, and"
3.3.7	change "work performed and comply" to "work performed <u>will</u> comply"
5.5.4	add "Actions if dangerous vapors (xylene) are encountered during drilling."
9.1.2	replace "The samples will... depth intervals..." with: "At each location the four surface samples will be composited and the four near surface samples will be composited."
9.1.3	replace "...the Consultant shall... will be analyzed" with: "EPA will determine, ^{in consultation with J-M,} the percentage of fill samples to be analyzed."
10.4.7	add: casing and <u>stable groundwater</u> elevations
10.5	add: installation of wells, a summary of field test results, and a <u>potentiometric ground water map</u> .

map of water table elevations

10.6.3

add: conductivity tests and ground water elevation measurements shall be.

If there are further questions on these modifications, I may be reached at (312)836-3009.

Sincerely Yours,

William D. Mains
OSC

WMains;Remedial Response Section II;mj;5/23/84

Manville
File

11 JUN 1987

MEMORANDUM

TO: Chris Grundler, OWPE

FROM: Babette J. Neuberger, Assistant Regional Counsel

RE: Administrative Order by Consent for Johns-Manville
Facility, Waukegan, Illinois

Enclosed please find the final administrative order by consent between U.S.EPA and Johns-Manville Sales Corporation. The order is submitted for final review and approval by the Office of Waste Programs Enforcement. An identical copy of the order has already been signed by management at Johns-Manville Sales Corporation and is presently in sign-off within Region V.

Thank you for your prompt review and approval of this order.

If you have any questions or comments please contact me at FTS 886-6840.

Enclosure

cc: William Mains w/out encl.

NEWS

From the office of
THE GOVERNOR



FOR IMMEDIATE RELEASE

217-782-7355

SPRINGFIELD, Ill., June 26--Governor James R. Thompson and the leaders of the House and Senate proposed the most ambitious hazardous waste cleanup program in Illinois history Tuesday, a \$20 million state-funded attack on abandoned hazardous waste sites across the state.

The Governor commended House Speaker Michael Madigan of Chicago, Senate President Philip Rock of Oak Park, House Republican Leader Lee Daniels and Senate Republican Leader Pate Philip, both of Elmhurst, for agreeing to sponsor the appropriations.

As part of this three-year "Clean Illinois" program, the Governor has proposed allocating \$2 million to speed up an inventory of potential danger spots, \$17 million for actual cleanup and \$1 million to begin monitoring the quality of groundwater in Illinois in Fiscal Year 1985.

"Over the past several years, we have made great strides to ensure the proper management of hazardous wastes," the Governor said. "But it isn't enough. While these programs have concentrated on the prevention of future problems, we must come to grips with the legacy of our industrial past -- the dozens of landfills and industrial sites where hazardous wastes were dumped before environmental regulations came into effect."

Thompson said the State will proceed on three specific sites in Fiscal Year 1985 -- Taylorville Landfill in Christian County, LeMear Landfill in St. Clair County and Dead Creek in St. Clair County. These will be the first steps in an effort to have the program aggressively deal with sites as quickly as possible.

Thompson said the State's Hazardous Waste Fund, supported by fees on the treatment and land disposal of hazardous wastes, will not provide enough dollars to meet the State's long-term needs.

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AD 1

"If we are to ensure that our children and our future generations have a healthy environment and unspoiled drinking water, we must begin now to provide a funding level that will determine which sites need cleanup and to minimize the red tape that hampers speedy action."

The program's first step will involve the complete assessment of potentially dangerous hazardous waste sites across the state, currently numbering 853. That list could grow to as many as 1,000 sites with further examination. Preliminary work already has been completed on 380 sites.

The Illinois Environmental Protection Agency estimates that as many as 10 per cent of the hundreds of sites now being evaluated may need some form of cleanup and that many of them will not be eligible for Superfund matching.

Thompson said some \$2 million of the fund will be allocated for this statewide assessment, which is to be completed by October 1985. Taking inventory of sites needing cleanup will allow the state to identify new sites that will be eligible for federal Superfund cleanup dollars and allow state-only cleanup sites to be ranked and acted on under procedures recently adopted by the Illinois Pollution Control Board.

The program also would work in cooperation with the Chemical Safety Research Initiative, proposed earlier this year by the Governor to provide laboratories to determine the toxicity of substances and conduct hazardous waste research.

The second step will be to use \$17 million of the fund to begin action quickly in FY 85 to clean up those sites already identified and provide a basis for funding more projects during the following two years.

Thompson said the new dollars will enable the State to make maximum use of federal Superfund money. Superfund, which is expected to be renewed in Congress for another five years, requires a 10 per cent funding commitment from the State.

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3. Fast-track construction starts for State funded cleanup projects - The Illinois EPA has already identified 16 sites that are not eligible under the federal program and over the next year will complete assessments on even more. \$8 million will be allocated for expeditious construction starts for projects most ready to proceed. The following candidates are listed for Fiscal Year 1985:

*Taylorville Landfill, Christian County
*LaMear Landfill, St. Clair County
*Dead Creek, St. Clair County

4. Maintain adequate contingency funds for emergency response and immediate containment actions - Providing new general fund support for full-scale cleanup projects will enable the State to maintain sufficient "uncommitted" funds, principally from hazardous waste disposal fees, to properly respond to emergency situations. In addition, these funds can be used for interim containment actions to prevent imminent damage at sites which require time-consuming study before final cleanup begins. Should excess funds accumulate, these funds can be channeled into other site cleanups resulting from the assessment process.
5. Enhance State's protective system for groundwater - In large part, this accelerated program to clean up hazardous waste sites is aimed at providing protection for the State's groundwater resources which provide drinking water for over 5.6 million people. While well water has historically been considered safe for public use, an increasing number of incidents of groundwater pollution illustrate the vulnerability of this important resource. We must adequately monitor and assess the quality of our groundwater to ensure that full protection is provided.

In FY 85, \$600,000 will be appropriated to the EPA to establish a Statewide network to monitor the quality of groundwater in Illinois and to assess the data submitted by regulated facilities, which must sample groundwater at their sites. In addition, \$400,000 will be appropriated to the Department of Energy and Natural Resources to enhance the Illinois Water Inventory and Aquifer Assessment Programs.

These actions are consistent with the recently completed Illinois State Water Plan, developed by a Task Force created by Governor Thompson in 1980. Under the State Water Plan, protection of underground water is identified as a critical water management issue.

PROBLEM STATEMENT

Illinois is faced with major, long-term cleanup needs for abandoned hazardous waste sites. Available resources are clearly inadequate to deal with present, much less, future needs.

Present Cleanup Needs:

- . 11 Illinois sites are listed on the federal Superfund list and thus eligible for 90 per cent federal funding.
- . Nine more State sites will probably be listed this year.

- . Estimated total cleanup cost for currently listed sites is \$46 million; the State share will be at least \$4.6 million. Over \$40 million will be needed for the new additions to the Superfund list, or about \$4.0 million more in State match.
- . 16 more Illinois sites are in need of cleanup but are ineligible for federal funds. Total cleanup costs will probably exceed \$10 million for these sites.
- . Revenue from State Hazardous Waste Fund for 1985-1990 is estimated to be \$5.8 million, barely enough to provide State matching funds for current Superfund sites -- and not enough for any additional Superfund sites, much less those sites not eligible for Superfund.

Future Cleanup Needs:

- . Illinois EPA is evaluating 853 potential problem sites for Superfund or State-only cleanup.
- . Up to 10 per cent of these sites may need some form of cleanup by the State and/or the federal government.
- . Potential cost is difficult to estimate but will far exceed the cleanup needs already confirmed.

BACKGROUND

Illinois historically has been a highly industrialized state. Beginning in the late nineteenth century, large manufacturing centers, representing all basic industries, have developed in various parts of the State. Every manufacturing operation generates some potentially hazardous by-products from the production of goods that we use every day. Metal finishing and electroplating, petroleum refining, paint, automotive, plastics and pharmaceutical manufacturing are among the industries in Illinois which generate hazardous wastes. The agricultural industry also generates potentially hazardous wastes through the use of fertilizers and pesticides.

With the post-World War II emergence of synthetic organic chemicals derived from petroleum feed stocks, the production and use of toxic chemicals has increased dramatically. Since 1940 the production of synthetic organic chemicals have increased by over 300 per cent, and an estimated 2,000 new chemicals are now synthesized and introduced into the environment each year.

Industries operated in the absence of comprehensive national environmental regulation until the early 1970's. Congressional passage of the Clean Air Act, Clean Water Act and the Resource Conservation and Recovery Act began an era of national commitment to a clean and healthy environment. All of these laws address the regulation of actively operating industries. As a result, the country is generating less pollution and there has been a significant enhancement of environmental quality. However, industrial practices prior to national and state environmental regulation have left the country with thousands of old, abandoned sites, many of which are laced with chemicals that threaten to contaminate the environment and may pose long term threats to public health.

There are two programs designed to deal with the cleanup of hazardous waste sites: the Comprehensive Environmental Response, Compensation and Liability Act (Superfund), passed by Congress in 1980, and the Illinois Hazardous Waste Fund.

SUPERFUND

Superfund authorizes the federal government to respond directly to releases of hazardous substances and pollutants that may endanger public health or welfare. Costs are covered by a \$1.6 billion fund, 86 per cent of which is financed by taxes on the manufacture or import of certain chemicals and petroleum, the remainder coming from general revenues. This fund is reimbursable: the government can take legal action to recover its cleanup costs from those subsequently identified as responsible for the release. Anyone liable for a release who fails to take ordered actions is liable for punitive damages equal to three times the government's response costs.

Cleanup efforts by USEPA and states are guided by provisions of the National Contingency Plan (NCP). The NCP identifies three types of responses for incident involving hazardous substances:

- . Immediate removal, which requires prompt response to prevent immediate and significant harm to human life, health or the environment.
- . Planned removal, which is needed when an expedited, but not necessarily immediate, response is required.
- . Remedial action, which requires more time and money and is intended to achieve a permanent solution. Prior to taking such action, two preparatory steps must be completed: (1) a Remedial Investigation/Feasibility Study and (2) the Project Design. To be eligible for a remedial action, a site must first be listed on the National Priority List.

Before Superfund dollars can be spent to clean up a site, a state must provide certain assurances to the federal government. First, the state must agree to contribute at least 10 per cent of the actual long-term remedial cleanup costs for each site if the property is privately owned. States are also responsible for assuring that an ultimate disposal site is available, and are responsible for site maintenance, if required, after six months.

National Priority List (NPL)

Superfund requires that a National Priority List be developed of at least 400 hazardous waste sites, which would then be candidates for remedial action. Sites are identified from a variety of sources and evaluated for possible inclusion on the NPL. Based on data collected in the evaluation, sites are ranked using the Hazard Ranking System (HRS).

The HRS is a mathematical model that takes into account the following criteria:

- . Possible risk to the population.
- . Hazard potential of substances at the site.

- . Potential for contaminating drinking water supplies and other pathways that affect human health.
- . Potential for destruction of sensitive ecosystems.

Sites are given priority based on scores obtained by the HRS.

At the present time, the Illinois EPA has identified 853 hazardous waste sites which require cleanup. These Illinois sites are included on the USEPA's national hazardous waste site inventory, known as the Emergency Remedial Response Inventory System (ERRIS). Attachment A is a map showing the number of ERRIS sites in each county in Illinois. Current experience shows that as many as 10 per cent of these sites may need some form of cleanup.

ERRIS is a system which is used to screen and rank all sites which may need cleanup and use of federal Superfund money. Each site undergoes a Preliminary Assessment which entails an analysis of existing data. If sufficient data is available the site is scored using the Hazardous Ranking System. If further data is needed a Site Investigation is conducted. This typically includes on-site sampling of soils, groundwater, surface waters, and wastes. Information from this effort is then used to score the site.

Once scored using the HRS, the site is nominated by Illinois EPA for placement on the NPL, which represents the worst sites in the State and nation. It is this list (a subset of the national inventory) that guides which state sites will be cleaned up using federal Superfund money. Currently, a numerical score of 28.5 points (100 point scale) is needed for placement on the NPL.

Illinois Sites on the National Priority List

In December 1981, the Illinois EPA identified and proposed to USEPA the listing of 27 Illinois sites on the NPL. Eleven of these were placed on the NPL. Nine additional sites have been recently proposed. Attachment B provides a summary listing of these sites.

Since December 1981, substantial progress has been made towards the ultimate cleanup of the 11 sites. Four are being cleaned up by private parties and seven with use of federal Superfund and State Hazardous Waste Fund monies. The status of each project is summarized as follows:

A & F Materials, Greenup - A partial consent decree has been negotiated with four responsible generators who are proceeding with immediate site remediation, design and construction. Surface cleanup to be completed by December 15, 1984 with total site cleanup done by July, 1985.

Wauconda Sand & Gravel, Wauconda - USEPA has completed the Remedial Investigations. The Feasibility Study is near completion and design work will start in early 1985.

Velsicol Chemical Corp., Marshall - The company has completed a project to solidify waste in their lagoons and has designed a groundwater protection system. A settlement agreement is being negotiated.

LaSalle Electric Utilities, LaSalle - Feasibility studies for cleanup are underway with design to be initiated early in 1985 and construction in late 1985.

Cross Brothers, Pembroke - Feasibility studies are complete with design and construction to be initiated in 1985.

Johns Manville Corp., Waukegan - Consent decree negotiations are underway and will result in a voluntary cleanup.

Koppers Co., Galesburg - Consent decree negotiations are underway and will result in a voluntary cleanup.

Byron Salvage Yard, Byron - Feasibility studies have been completed. Design work to implement the selected cleanup option will be completed this year with construction to begin in early 1985.

Acme Solvents Co., Morristown - Remedial investigation and feasibility study will be completed this year with design and construction starting in 1985.

Belvidere Municipal Landfill No. 1, Belvidere - Remedial investigations and Feasibility studies will be initiated in Fall 1984 with design and construction efforts to follow in 1985.

Outboard Marine Corp., Waukegan - Feasibility studies have been completed and design work will be initiated by USEPA in Fall 1984 with construction to begin in mid-1985.

STATE HAZARDOUS WASTE FUND

The other source of funding for hazardous waste cleanup operations in Illinois is the Hazardous Waste Fund. Created by legislation in 1979, the Fund is used to finance necessary corrective and preventive measures to reduce immediate or long-term dangers to public health and the environment from hazardous wastes. The Illinois EPA began collecting the fees in January of 1980. Operators of hazardous waste disposal sites were assessed 1-cent per gallon for hazardous wastes they received.

In 1983 legislation was adopted (P.A. 83-983) which raised the disposal fee to 3 cents per gallon and assessed the fee against on-site hazardous waste disposers up to a limit of \$10,000. It also assessed a fee ranging from \$2,000 to \$9,000 for hazardous waste underground injection wells and 1 cent per gallon for hazardous waste treatment facilities.

In addition to increasing hazardous waste fees, the law made substantive changes in the law related to the Hazardous Waste Fund:

*The Illinois EPA was designated the State's implementing agency for purposes of the federal Superfund program and was authorized to use the Hazardous Waste Fund as Superfund match.

*The General Assembly also created a framework for an Illinois "Superfund". The Pollution Control Board was directed to adopt a contingency plan similar to USEPA's National Contingency Plan to guide the State's cleanup program. The Illinois EPA was authorized to carry out removal actions and to notify persons liable for the release of hazardous substances giving them an opportunity to respond. The law also established liability for releases of hazardous substances, including the potential for treble damages in a case where the responsible party has had an opportunity to respond but has not. Money recovered by the State under these new provisions is to be deposited in the Hazardous Waste Fund.

Receipts from the original hazardous waste fee averaged about \$330,000 per year. The new fee system, which became effective the first quarter of 1984, is projected to generate approximately \$1.3 million per year. However under existing law, the landfilling of hazardous waste will be prohibited after January 1, 1987, unless it can be demonstrated that there is no economically reasonable or technologically feasible alternative available. This provision will result in a substantial decrease in the volume of hazardous waste disposed of in landfills, with an equivalent decrease in hazardous waste fund revenues. The Illinois EPA estimates that annual fund revenues will drop to around \$600,000 per year.

To date about \$1 million from the Hazardous Waste Fund has been spent for state match for federal Superfund projects, emergency response and containment actions, and state site cleanup. The following table summarizes the past operation and future projections for the Fund:

Summary of Hazardous Waste Fund

<u>Fiscal Year</u>	<u>Fee Revenues</u>	<u>Expenditures and Obligations</u>	<u>Available Balance</u>
<u>Current Funds</u>			
1981	272,949	24,884	248,065
1982	305,745	15,811	537,999
1983	208,736	732,301	14,434
1984	525,370	158,542	381,262
<u>Projected Funds</u>			
Carryover	381,262		
1985	1,300,000		
1986	1,300,000		
1987	1,000,000		
1988	600,000		
1989	600,000		
1990	600,000		
	<u>\$5,781,262</u>		

The Fund simply will not provide a sufficient flow of revenue to meet the State's immediate and long-term cleanup needs. The State has 11 sites eligible for Superfund. Four of these sites are now in the process of being cleaned up by private parties. Seven are in need of government cleanup at a cost of approximately \$46 million — \$4.6 million of which must be provided by the State. Most of the State's Hazardous Waste Fund revenue generated between FY 1985 and FY 1990 will be needed just to provide State match for these seven projects. This leaves largely unaddressed:

- New Superfund sites, which may total as many as 30 after the Illinois EPA finishes its survey of potential problem sites.
- Sites which do not qualify for Superfund, and which need some form of cleanup to protect the environment and public health.
- Significant emergency cleanup situations which could easily occur in future years.

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**HAZARDOUS WASTE AND CHEMICAL SAFETY:
THE THOMPSON LEGISLATIVE RECORD**

A series of legislative initiatives proposed and supported by the Thompson Administration over the last several years have strengthened Illinois' regulatory program for hazardous waste management and for dealing with toxic substances in the environment.

*1979 amendments (HB 453) provided:

- . Basic statutory authority for the Illinois EPA to assume delegation of the hazardous waste program under the federal Resource Conservation and Recovery Act.
- . Authority for the Pollution Control Board to set standards for post-closure care of disposal sites.
- . Financial responsibility requirements for operators of disposal sites.
- . Restrictions on the location of new disposal sites.
- . A fee system for the disposal of hazardous waste to create an emergency cleanup fund.

*Also in 1979, legislation was enacted which prohibits the disposal of hazardous hospital waste in any landfill (HB 1919).

*1980 amendments (HB 3365, HB3366) were proposed by Governor Thompson to build on the existing regulatory framework. In his special hazardous waste message to the General Assembly, the Governor outlined the following proposals which were then enacted in the spring of 1980:

- . Authority to restrict future uses of hazardous waste disposal sites.
- . A Class 4 felony penalty for illegal dumping of hazardous wastes.
- . A new Hazardous Waste Research Fund to allow the Department of Energy and Natural Resources to examine alternatives to land burial of wastes.
- . Authority to prohibit by regulation the land burial of specific categories of hazardous wastes.
- . Low interest financing under the Environmental Facilities Financing Act for processes which reduce the volume of hazardous waste produced.

*1981 amendments (SB 875) offered by the Administration made statutory changes required for Illinois to qualify for delegation of the federal hazardous waste program. The bill modified the statutory definition of hazardous waste, strengthened penalties for hazardous waste violations, and set up an expedited rulemaking process for hazardous waste regulations.

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Thompson said Illinois now has 11 sites eligible for Superfund -- four of them now in the process of being cleaned up by responsible parties. Seven are in need of government cleanup at a cost of about \$45.9 million (\$4.5 million provided by the state.)

While the current fee system is now helping fund the state's 10 per cent match on several Superfund projects, he said, it will not cover all expected Superfund projects. In fact, revenue from fees will drop dramatically after 1987, when the Administration-backed law banning the land disposal of hazardous wastes takes effect.

The State already has discovered 16 sites not covered by the current Superfund program and is expected to discover even more -- potential cleanup projects that the current fee-generated revenue will not be able to adequately fund in the coming years.

Thompson said the State also will be able to clean up projects that do not qualify for federal money, therefore requiring full state funding, and enable action to be taken more quickly by the State in emergency situations.

The final portion of the program involves monitoring of groundwater across the state.

In FY 85, \$600,000 will be appropriated to the State EPA to establish a statewide network to monitor the quality of Illinois groundwater and assess the quality of water samples regulated facilities are required to submit.

Another \$400,000 will be appropriated by the Department of Energy and Natural Resources to improve the Illinois Water Inventory and Aquifer Assessment Programs.

"In large part, accelerating our program to clean up hazardous waste sites is aimed at providing protection for our valuable groundwater resources," Thompson said. "Groundwater provides about half of our State's citizens with drinking water. While it historically has been safe, there have been an increasing number of documented instances of groundwater pollution. It is a fragile but important natural resource that we must protect."

THE THOMPSON PROPOSAL

Governor Thompson proposes to dedicate \$20 million beginning in FY 85 for support of a three-year effort to develop an expanded program for cleanup and protection from hazardous waste sites. Setting aside this advance funding will serve notice that the cleanup program in Illinois is going to move ahead at an accelerated pace. This effort is composed of five major elements:

1. Complete the critical task of characterizing cleanup needs in Illinois by October 1985 - The Illinois EPA is currently evaluating 853 sites suspected of being environmental problems. Preliminary work has been done on 380 sites. An evaluation of each remaining site must be completed to establish a clear picture of the State's long-term cleanup needs and target those sites posing the greatest environmental and public health threat. This also will enable the State to identify new sites that will be eligible for federal Superfund cleanup and other sites that must be financed entirely with State funds. State sites will be ranked and addressed under procedures adopted by the Illinois Pollution Control Board that are similar to federal guidelines under Superfund. Under these rules, the Illinois EPA will soon be proposing a state priority list of hazardous waste sites. \$2 million will be allocated to speedup and complete this process and to provide the Illinois EPA with sufficient staff and laboratory resources to manage a comprehensive cleanup program.

In addition, in his State of the State Initiative, the Governor announced a \$2.1 million program for increased research and testing of toxic chemicals and hazardous wastes. The Department of Energy and Natural Resources will expand its hazardous waste research program to study disposal practices and disposal sites. In addition, it will conduct problem solving research. Finally, the Department will establish a program to assist industry in siting and waste reduction.

Simultaneously, the Illinois EPA will begin the development of toxicity testing involving both centralized and mobile laboratories. The toxicity tests will evaluate the potential ill effects for humans and the environment of chemical substances in our society. The new tests will assist in such activities as the awarding of permits, emergency response, the assessment of toxic hot spots and hazardous substance clean-up.

2. Provide State matching funds for the Federal Superfund Program - The State has 11 sites currently eligible for Superfund. Four of these sites are now in the process of being cleaned up by private parties. Seven are still in need of government cleanup at a cost of about \$46 million -- \$4.6 million of which must be provided by the State. Even more State matching funds will be needed if design and construction bids result in increased project costs. Nine new sites have been nominated for Superfund listing this year. The Illinois EPA estimates that when its statewide assessment of potential sites is completed, as many as 30 more sites will be listed. Therefore, a total of \$9 million will be reserved for these projects to ensure that Illinois receives the maximum amount of federal Superfund assistance.

***In 1981, the Thompson Administration supported bills to:**

- . Prohibit land burial of hazardous wastes, if alternative technology is available, after January 1, 1987 (SB 171).**
- . Allow for local government approval of all new waste disposal sites (SB 172).**

***Governor Thompson signed bills in 1983 which restructured and strengthened the State's criminal penalties for hazardous waste violations (HB 2171), authorized revenue bonding to finance hazardous waste treatment facilities (HB 1054) and prohibited the disposal of liquid hazardous waste after July 1, 1984, unless it can be demonstrated to Illinois EPA that no reasonable alternative exists (HB 1054).**

***A comprehensive set of amendments was enacted in 1983 which dealt primarily with the State's hazardous waste cleanup program. SB 143 contained the following provisions:**

- . Hazardous Waste Fund fees effective January 1, 1984: 3 cents for disposal sites; 1 cent for treatment sites; \$2,000, \$5,000, or \$9,000 for underground injection wells. Fees to be suspended when balance reaches \$10 million. 80 per cent of fee revenue to be used for Superfund projects. 7/8 of fees to the Hazardous Waste Fund: 1/8 to the Research Fund. The Hazardous Waste Fund may be used for Superfund match.**
- . A board to adopt national contingency plan to govern cleanup responses.**
- . Liability for release spelled out. Money recovered to be returned to the Hazardous Waste Fund.**

***The Illinois Employee Right to Know Act, approved in 1983, requires employers to label containers of toxic substances used in the workplace and provide information to employees about the properties of the substances.**

***In 1983 Governor Thompson proposed the establishment of an Office of Chemical Safety in the Illinois EPA to coordinate Agency programs and work with other agencies to meet potential problems of toxic substances in the environment. The General Assembly approved funding of the Office beginning in Fiscal Year 1984.**

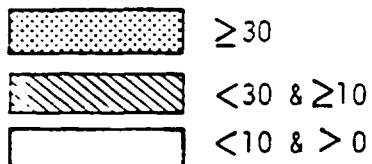
***As part of his Fiscal Year 1985 budget request, the Governor has proposed a Chemical Safety Research initiative to further develop the State's chemical safety program by addressing the need for more information and understanding of the complex issues surrounding the presence of toxics in the environment. As part of the Initiative:**

- . The EPA will begin the development of a toxicity testing capability to help evaluate the potential ill-effects on humans and the environment of chemical substances.**
- . The Department of Energy and Natural Resources will set up a Hazardous Waste Research and Information Center to work with other state agencies, local governments and industry on hazardous waste economic and policy issues, including recycling and reduction of wastes, education and technical assistance and siting needs.**

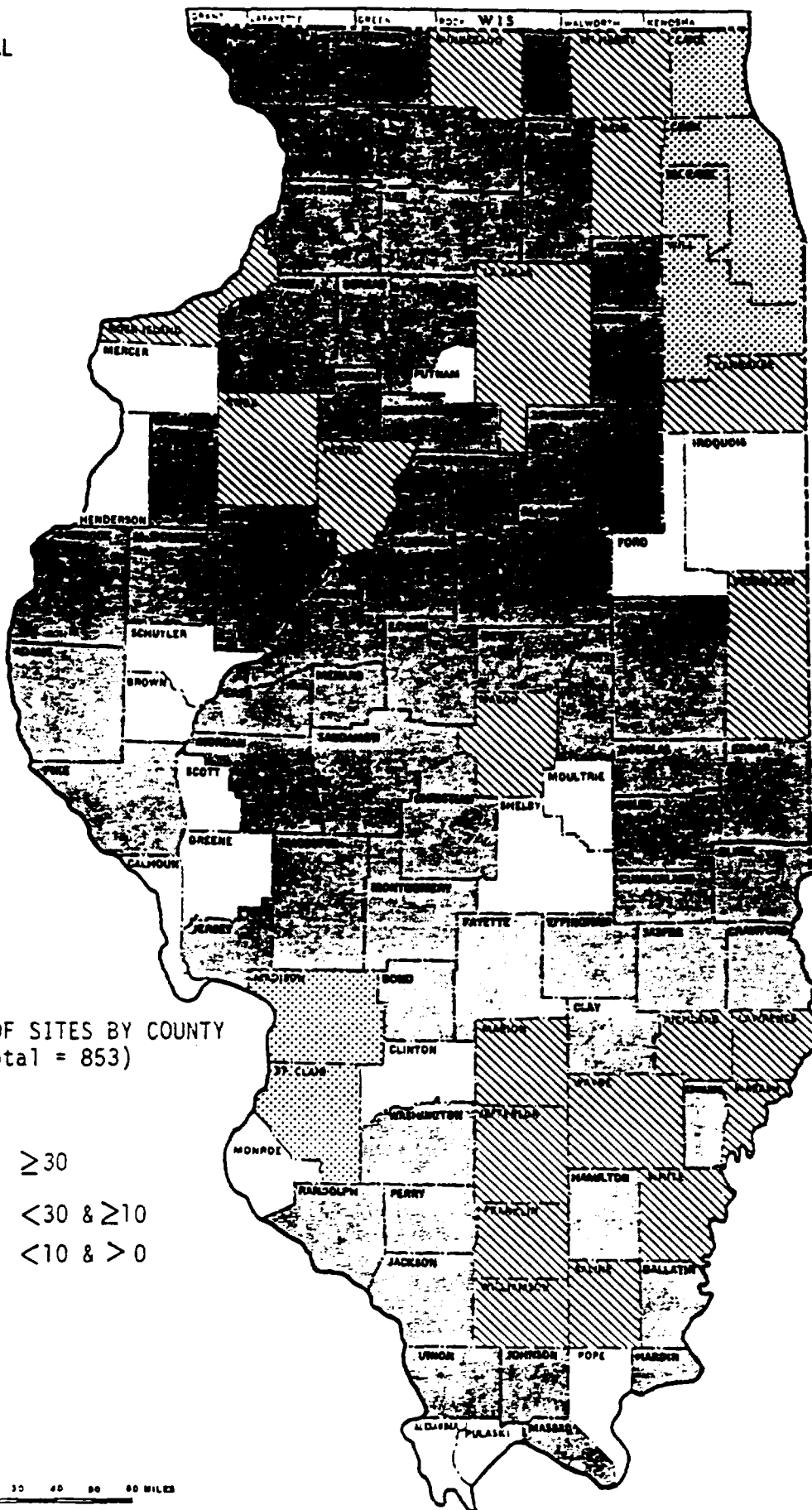
ATTACHMENT A

POTENTIAL
CLEANUP
NEEDS

NUMBER OF SITES BY COUNTY
(Total = 853)



0 5 10 20 30 40 50 60 MILES



NATIONAL PRIORITIES LIST (NPL) SITES

- | | | |
|-----|--|-----------|
| 1. | <u>A. & F. Materials, Greenup</u>
PCB's contaminating Embarras River and groundwater from overflowing waste oil lagoons. | *HRS 55.5 |
| 2. | <u>Wauconda Sand & Gravel, Wauconda</u>
Closed landfill leaching chemicals into groundwater. One well known to be contaminated. | HRS 53.4 |
| 3. | <u>Velsicol Chemical Corp., Marshall</u>
Chlordane pesticide leaching from holding lagoons and contaminating groundwater. | HRS 48.7 |
| 4. | <u>Outboard Marine Corp. (Waukegan Harbor), Waukegan</u>
PCB contamination of Waukegan Harbor and plant grounds of OMC. | HRS 42.8 |
| 5. | <u>Cross Brothers Pail Recycling Site, Pembroke</u>
Chemical wastes dumped on the ground during drum recycling, leaching into groundwater and contaminating two wells. | HRS 42.0 |
| 6. | <u>Johns-Manville Corp., Waukegan</u>
Asbestos waste pile along shores of Lake Michigan as residue of manufacturing processes. | HRS 38.8 |
| 7. | <u>Koppers Co., Galesburg</u>
Chemical wastes from holding lagoon contaminating groundwater. Firm has been treating railroad ties for 75 years. | HRS 34.7 |
| 8. | <u>Byron Salvage Yard, Byron</u>
Cyanide and toxic metals leaching contaminants into groundwater and nearby stream. | HRS 33.9 |
| 9. | <u>ACME Solvents Co., Morristown</u>
Drums of chemicals ordered removed were buried and some are leaking. Some wells in the area have been closed because of contamination. | HRS 31.9 |
| 10. | <u>LaSalle Electric Utilities, LaSalle</u>
PCB laden waste oil from capacitor manufacturing used to spray parking lots for dust control contaminating groundwater. | HRS 30.9 |
| 11. | <u>Belvidere Municipal Landfill #1, Belvidere</u>
PCB and other chemical wastes leaching from improperly covered site posing threat to groundwater. | HRS 28.5 |

*HRS refers to the U.S EPA Hazard Ranking System used to set priorities for site cleanup.

PROPOSED NATIONAL PRIORITIES LIST SITES

12. Sangamo Dump, Crab Orchard Lake HRS 59.09
An abandoned on-site dump at which PCB's, lead, dioxin and furans have been found. Some contamination has been discovered in lake bottom sediments.
13. Petersen Sand & Gravel, Libertyville HRS 44.16
A former sand and gravel pit from which several hundred drums of hazardous wastes have been removed thus far.
14. Kerr-McGee Reed-Keppler Park, West Chicago HRS 41.4
Radioactive wastes deposited in former quarry that is now a city park.
15. Pagel's Pit, New Milford HRS 40.7
Formerly a sand and gravel pit prior to its licensing in 1972 this asphalt lined sanitary landfill has had hazardous substances detected in monitoring and residential wells near the facility.
16. U. S. Ecology, Sheffield HRS 39.44
Once Illinois' largest hazardous waste disposal site at which contamination has been detected in numerous monitoring wells at the site.
17. Kerr-McGee, Sewage Treatment Plant Site, West Chicago HRS 36.8
Formerly a dump for radioactive waste, the City of West Chicago discovered high levels of radioactivity during construction at their sewage treatment plant.
18. Taracorp, Granite City HRS 35.75
Piles of lead wastes from a battery recycling operation causing air and soil contamination.
19. Kerr-McGee Residential Areas, West Chicago HRS 34.7
Several city blocks in a residential area near the closed Kerr-McGee plant are contaminated with radioactive materials.
20. McWhorter Chemical, Carpentersville HRS 28.5
A dump site from 1908-1945, this site is suspected of leaching contaminants into the groundwater.

STATE SITES NEEDING CLEANUP

- | | | |
|-----|--|-----------|
| 21. | <u>Koppers Co., Carbondale</u>
Groundwater contamination by chemicals from railroad tie treating operations. | HRS 15.1 |
| 22. | <u>Hopkins Chemical Co., Atlanta</u>
A facility manufacturing agricultural pesticides which have contaminated plant, surrounding grounds and groundwater. | HRS 23.99 |
| 23. | <u>Taylorville Landfill, Taylorville</u>
Exposed wastes leaching into a floodplain. | HRS 21.2 |
| 24. | <u>Luminous Processes, Ottawa</u>
Radioactive material in a closed radium watch dial factory building. | HRS 20.7 |
| 25. | <u>Dead Creek, Cahokia</u>
A 40 year dumping ground for a variety of wastes with a history of causing animal skin burns. Tests indicate high levels of PCB's and other hazardous wastes. | HRS 18.4 |
| 26. | <u>U. S. Drum, Chicago</u> <i>1/2 mi. west of Lake Calumet - S Chicago</i>
Once a solvent recovery operation, unrecoverable wastes were dumped on the ground contaminating ground and surface waters. | HRS 18.01 |
| 27. | <u>Brockman #1, Ottawa</u>
Hazardous wastes buried at the site are leaching into the groundwater. | HRS 15.1 |
| 28. | <u>Calumet Container Corp., Hammond-Chicago</u>
Chemical wastes leaching into ground from drum recycling operation. | HRS 10.71 |
| 29. | <u>LaMear Landfill, Fairmont City</u>
Abandoned drums along the Cahokia Canal that contain phenols. | HRS 10.3 |
| 30. | <u>Steagel Landfill, Galesburg</u>
A private landfill which accepted hazardous wastes until its closure in 1974. Wastes are presently leaching into a nearby stream. | HRS 8.7 |
| 31. | <u>New Jersey Zinc, DePue</u>
A 15-acre pile of tailings from zinc processing plant leaching into a ditch that drains into Lake DePue. | HRS 8.6 |
| 32. | <u>Monsanto Chemical Disposal Site, Sauget</u>
Closed toxic waste disposal site leaching chemicals into the Mississippi River. | HRS 7.2 |
| 33. | <u>U. S. Scrap, Chicago</u>
An abandoned site containing a large number of drums of chemical wastes. | HRS 5.9 |

34. Modern Plating Co., Freeport HRS 5.3
Lagoons filled with plating sludges leaching into the
Pecatonica River and contaminating groundwater.
35. Peoples Avenue Landfill, Rockford HRS 5.3
Industrial wastes leaching into groundwater forcing
abandonment of municipal wells.
36. Paxton Landfill #1, Chicago HRS 3.2
Closed landfill that once accepted large amounts of
liquid hazardous wastes now contaminating groundwater
and Lake Calumet.

12-201 St. Dykischy - Chicago



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REMEDIAL
RESPONSE BRANCH

Copy to Press

NEWS

From the office of
THE GOVERNOR



FOR IMMEDIATE RELEASE

217-782-7355

SPRINGFIELD, Ill., June 26--Governor James R. Thompson and the leaders of the House and Senate proposed the most ambitious hazardous waste cleanup program in Illinois history Tuesday, a \$20 million state-funded attack on abandoned hazardous waste sites across the state.

The Governor commended House Speaker Michael Madigan of Chicago, Senate President Philip Rock of Oak Park, House Republican Leader Lee Daniels and Senate Republican Leader Pate Philip, both of Elmhurst, for agreeing to sponsor the appropriations.

As part of this three-year "Clean Illinois" program, the Governor has proposed allocating \$2 million to speed up an inventory of potential danger spots, \$17 million for actual cleanup and \$1 million to begin monitoring the quality of groundwater in Illinois in Fiscal Year 1985.

"Over the past several years, we have made great strides to ensure the proper management of hazardous wastes," the Governor said. "But it isn't enough. While these programs have concentrated on the prevention of future problems, we must come to grips with the legacy of our industrial past -- the dozens of landfills and industrial sites where hazardous wastes were dumped before environmental regulations came into effect."

Thompson said the State will proceed on three specific sites in Fiscal Year 1985 -- Taylorville Landfill in Christian County, LeMear Landfill in St. Clair County and Dead Creek in St. Clair County. These will be the first steps in an effort to have the program aggressively deal with sites as quickly as possible.

Thompson said the State's Hazardous Waste Fund, supported by fees on the treatment and land disposal of hazardous wastes, will not provide enough dollars to meet the State's long-term needs.

-more-

AD 2

Thompson said Illinois now has 11 sites eligible for Superfund -- four of them now in the process of being cleaned up by responsible parties. Seven are in need of government cleanup at a cost of about \$45.9 million (\$4.5 million provided by the state.)

While the current fee system is now helping fund the state's 10 per cent match on several Superfund projects, he said, it will not cover all expected Superfund projects. In fact, revenue from fees will drop dramatically after 1987, when the Administration-backed law banning the land disposal of hazardous wastes takes effect.

The State already has discovered 16 sites not covered by the current Superfund program and is expected to discover even more -- potential cleanup projects that the current fee-generated revenue will not be able to adequately fund in the coming years.

Thompson said the State also will be able to clean up projects that do not qualify for federal money, therefore requiring full state funding, and enable action to be taken more quickly by the State in emergency situations.

The final portion of the program involves monitoring of groundwater across the state.

In FY 85, \$600,000 will be appropriated to the State EPA to establish a statewide network to monitor the quality of Illinois groundwater and assess the quality of water samples regulated facilities are required to submit.

Another \$400,000 will be appropriated by the Department of Energy and Natural Resources to improve the Illinois Water Inventory and Aquifer Assessment Programs.

"In large part, accelerating our program to clean up hazardous waste sites is aimed at providing protection for our valuable groundwater resources," Thompson said. "Groundwater provides about half of our State's citizens with drinking water. While it historically has been safe, there have been an increasing number of documented instances of groundwater pollution. It is a fragile but important

3. Fast-track construction starts for State funded cleanup projects - The Illinois EPA has already identified 16 sites that are not eligible under the federal program and over the next year will complete assessments on even more. \$8 million will be allocated for expeditious construction starts for projects most ready to proceed. The following candidates are listed for Fiscal Year 1985:

*Taylorville Landfill, Christian County
*LaMear Landfill, St. Clair County
*Dead Creek, St. Clair County

4. Maintain adequate contingency funds for emergency response and immediate containment actions - Providing new general fund support for full-scale cleanup projects will enable the State to maintain sufficient "uncommitted" funds, principally from hazardous waste disposal fees, to properly respond to emergency situations. In addition, these funds can be used for interim containment actions to prevent imminent damage at sites which require time-consuming study before final cleanup begins. Should excess funds accumulate, these funds can be channeled into other site cleanups resulting from the assessment process.
5. Enhance State's protective system for groundwater - In large part, this accelerated program to clean up hazardous waste sites is aimed at providing protection for the State's groundwater resources which provide drinking water for over 5.6 million people. While well water has historically been considered safe for public use, an increasing number of incidents of groundwater pollution illustrate the vulnerability of this important resource. We must adequately monitor and assess the quality of our groundwater to ensure that full protection is provided.

In FY 85, \$600,000 will be appropriated to the EPA to establish a Statewide network to monitor the quality of groundwater in Illinois and to assess the data submitted by regulated facilities, which must sample groundwater at their sites. In addition, \$400,000 will be appropriated to the Department of Energy and Natural Resources to enhance the Illinois Water Inventory and Aquifer Assessment Programs.

These actions are consistent with the recently completed Illinois State Water Plan, developed by a Task Force created by Governor Thompson in 1980. Under the State Water Plan, protection of underground water is identified as a critical water management issue.

PROBLEM STATEMENT

Illinois is faced with major, long-term cleanup needs for abandoned hazardous waste sites. Available resources are clearly inadequate to deal with present, much less, future needs.

Present Cleanup Needs:

- . 11 Illinois sites are listed on the federal Superfund list and thus eligible for 90 per cent federal funding.
- . Nine more State sites will probably be listed this year.

There are two programs designed to deal with the cleanup of hazardous waste sites: the Comprehensive Environmental Response, Compensation and Liability Act (Superfund), passed by Congress in 1980, and the Illinois Hazardous Waste Fund.

SUPERFUND

Superfund authorizes the federal government to respond directly to releases of hazardous substances and pollutants that may endanger public health or welfare. Costs are covered by a \$1.6 billion fund, 86 per cent of which is financed by taxes on the manufacture or import of certain chemicals and petroleum, the remainder coming from general revenues. This fund is reimbursable: the government can take legal action to recover its cleanup costs from those subsequently identified as responsible for the release. Anyone liable for a release who fails to take ordered actions is liable for punitive damages equal to three times the government's response costs.

Cleanup efforts by USEPA and states are guided by provisions of the National Contingency Plan (NCP). The NCP identifies three types of responses for incident involving hazardous substances:

- . Immediate removal, which requires prompt response to prevent immediate and significant harm to human life, health or the environment.
- . Planned removal, which is needed when an expedited, but not necessarily immediate, response is required.
- . Remedial action, which requires more time and money and is intended to achieve a permanent solution. Prior to taking such action, two preparatory steps must be completed: (1) a Remedial Investigation/Feasibility Study and (2) the Project Design. To be eligible for a remedial action, a site must first be listed on the National Priority List.

Before Superfund dollars can be spent to clean up a site, a state must provide certain assurances to the federal government. First, the state must agree to contribute at least 10 per cent of the actual long-term remedial cleanup costs for each site if the property is privately owned. States are also responsible for assuring that an ultimate disposal site is available, and are responsible for site maintenance, if required, after six months.

National Priority List (NPL)

Superfund requires that a National Priority List be developed of at least 400 hazardous waste sites, which would then be candidates for remedial action. Sites are identified from a variety of sources and evaluated for possible inclusion on the NPL. Based on data collected in the evaluation, sites are ranked using the Hazard Ranking System (HRS).

The HRS is a mathematical model that takes into account the following criteria:

- . Possible risk to the population.
- . Hazard potential of substances at the site.

LaSalle Electric Utilities, LaSalle - Feasibility studies for cleanup are underway with design to be initiated early in 1985 and construction in late 1985.

Cross Brothers, Pembroke - Feasibility studies are complete with design and construction to be initiated in 1985.

Johns Manville Corp., Waukegan - Consent decree negotiations are underway and will result in a voluntary cleanup.

Koppers Co., Galesburg - Consent decree negotiations are underway and will result in a voluntary cleanup.

Byron Salvage Yard, Byron - Feasibility studies have been completed. Design work to implement the selected cleanup option will be completed this year with construction to begin in early 1985.

Acme Solvents Co., Morristown - Remedial investigation and feasibility study will be completed this year with design and construction starting in 1985.

Belvidere Municipal Landfill No. 1, Belvidere - Remedial investigations and Feasibility studies will be initiated in Fall 1984 with design and construction efforts to follow in 1985.

Outboard Marine Corp., Waukegan - Feasibility studies have been completed and design work will be initiated by USEPA in Fall 1984 with construction to begin in mid-1985.

STATE HAZARDOUS WASTE FUND

The other source of funding for hazardous waste cleanup operations in Illinois is the Hazardous Waste Fund. Created by legislation in 1979, the Fund is used to finance necessary corrective and preventive measures to reduce immediate or long-term dangers to public health and the environment from hazardous wastes. The Illinois EPA began collecting the fees in January of 1980. Operators of hazardous waste disposal sites were assessed 1-cent per gallon for hazardous wastes they received.

In 1983 legislation was adopted (P.A. 83-983) which raised the disposal fee to 3 cents per gallon and assessed the fee against on-site hazardous waste disposers up to a limit of \$10,000. It also assessed a fee ranging from \$2,000 to \$9,000 for hazardous waste underground injection wells and 1 cent per gallon for hazardous waste treatment facilities.

In addition to increasing hazardous waste fees, the law made substantive changes in the law related to the Hazardous Waste Fund:

*The Illinois EPA was designated the State's implementing agency for purposes of the federal Superfund program and was authorized to use the Hazardous Waste Fund as Superfund match.

The Fund simply will not provide a sufficient flow of revenue to meet the State's immediate and long-term cleanup needs. The State has 11 sites eligible for Superfund. Four of these sites are now in the process of being cleaned up by private parties. Seven are in need of government cleanup at a cost of approximately \$46 million — \$4.6 million of which must be provided by the State. Most of the State's Hazardous Waste Fund revenue generated between FY 1985 and FY 1990 will be needed just to provide State match for these seven projects. This leaves largely unaddressed:

- New Superfund sites, which may total as many as 30 after the Illinois EPA finishes its survey of potential problem sites.
- Sites which do not qualify for Superfund, and which need some form of cleanup to protect the environment and public health.
- Significant emergency cleanup situations which could easily occur in future years.

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[illegible]

Neiderganz/Mains

WORK ASSIGNMENT

U.S. 45403
SPM L. Martin/GLO
RECEIVED
Nied/Mains

JUL - 3 1984

A. Contractor: CH2M Hill
1941 Roland Clarke Place CH2M HILL/WDC
Reston, VA 22091

B. Contract Number: 68-01-6692

C. SITE/TITLE: JOHNS MANVILLE, IL

(COMMUNITY RELATIONS PLAN)

D. Assignment Number: 07.5VA5.0

W65903

E. Statement of Work:

F. Level of Effort (Work hours): 60

G. Period of Performance: 1 MONTH

\$3000

Contracting Officer: Dorothy Tyler Phone: 382-3199
Environmental Protection Agency (PM-214-F)
401 M Street, S.W.
Washington, D.C. 20460

Contracting Officer Approval

Date

7/3/84

Project Officer: Paul Nadeau Phone: 382-2339
Environmental Protection Agency (WH-548E)
401 M Street, S.W.
Washington, D.C. 20460

Signature

Paul A. Nadeau

Date

6/21/84

Deputy Project Officer: Nancy Willis Phone: 382-2339
Environmental Protection Agency (WH-548E)
401 M Street, S.W.
Washington, D.C. 20460

Signature

Nancy Willis

Date

6/18/84

Headquarters Contact

Regional Site Project Officer

Tony Diecidue
EPA (WH-548E)
401 M Street, S.W.
Washington, D.C. 20460
Phone: 382-4632

Signature

T. Diecidue

Date

6/18/84

Tom Sheckells, Chief, Remedial Action Branch

T. Sheckells

*In 1981, the Thompson Administration supported bills to:

- . Prohibit land burial of hazardous wastes, if alternative technology is available, after January 1, 1987 (SB 171).
- . Allow for local government approval of all new waste disposal sites (SB 172).

*Governor Thompson signed bills in 1983 which restructured and strengthened the State's criminal penalties for hazardous waste violations (HB 2171), authorized revenue bonding to finance hazardous waste treatment facilities (HB 1054) and prohibited the disposal of liquid hazardous waste after July 1, 1984, unless it can be demonstrated to Illinois EPA that no reasonable alternative exists (HB 1054).

*A comprehensive set of amendments was enacted in 1983 which dealt primarily with the State's hazardous waste cleanup program. SB 143 contained the following provisions:

- . Hazardous Waste Fund fees effective January 1, 1984: 3 cents for disposal sites; 1 cent for treatment sites; \$2,000, \$5,000, or \$9,000 for underground injection wells. Fees to be suspended when balance reaches \$10 million. 80 per cent of fee revenue to be used for Superfund projects. 7/8 of fees to the Hazardous Waste Fund: 1/8 to the Research Fund. The Hazardous Waste Fund may be used for Superfund match.
- . A board to adopt national contingency plan to govern cleanup responses.
- . Liability for release spelled out. Money recovered to be returned to the Hazardous Waste Fund.

*The Illinois Employee Right to Know Act, approved in 1983, requires employers to label containers of toxic substances used in the workplace and provide information to employees about the properties of the substances.

*In 1983 Governor Thompson proposed the establishment of an Office of Chemical Safety in the Illinois EPA to coordinate Agency programs and work with other agencies to meet potential problems of toxic substances in the environment. The General Assembly approved funding of the Office beginning in Fiscal Year 1984.

*As part of his Fiscal Year 1985 budget request, the Governor has proposed a Chemical Safety Research initiative to further develop the State's chemical safety program by addressing the need for more information and understanding of the complex issues surrounding the presence of toxics in the environment. As part of the Initiative:

- . The EPA will begin the development of a toxicity testing capability to help evaluate the potential ill-effects on humans and the environment of chemical substances.
- . The Department of Energy and Natural Resources will set up a Hazardous Waste Research and Information Center to work with other state agencies, local governments and industry on hazardous waste economic and policy issues, including recycling and reduction of

Attachment BILLINOIS CLEANUP SITESNATIONAL PRIORITIES LIST (NPL) SITES

- | | | |
|-----|--|-----------|
| 1. | <u>A. & F. Materials, Greenup</u>
PCB's contaminating Embarras River and groundwater from overflowing waste oil lagoons. | *HRS 55.5 |
| 2. | <u>Wauconda Sand & Gravel, Wauconda</u>
Closed landfill leaching chemicals into groundwater. One well known to be contaminated. | HRS 53.4 |
| 3. | <u>Velsicol Chemical Corp., Marshall</u>
Chlordane pesticide leaching from holding lagoons and contaminating groundwater. | HRS 48.7 |
| 4. | <u>Outboard Marine Corp. (Waukegan Harbor), Waukegan</u>
PCB contamination of Waukegan Harbor and plant grounds of OMC. | HRS 42.8 |
| 5. | <u>Cross Brothers Pail Recycling Site, Pembroke</u>
Chemical wastes dumped on the ground during drum recycling, leaching into groundwater and contaminating two wells. | HRS 42.0 |
| 6. | <u>Johns-Manville Corp., Waukegan</u>
Asbestos waste pile along shores of Lake Michigan as residue of manufacturing processes. | HRS 38.8 |
| 7. | <u>Koppers Co., Galesburg</u>
Chemical wastes from holding lagoon contaminating groundwater. Firm has been treating railroad ties for 75 years. | HRS 34.7 |
| 8. | <u>Byron Salvage Yard, Byron</u>
Cyanide and toxic metals leaching contaminants into groundwater and nearby stream. | HRS 33.9 |
| 9. | <u>ACME Solvents Co., Morristown</u>
Drums of chemicals ordered removed were buried and some are leaking. Some wells in the area have been closed because of contamination. | HRS 31.9 |
| 10. | <u>LaSalle Electric Utilities, LaSalle</u>
PCB laden waste oil from capacitor manufacturing used to spray parking lots for dust control contaminating groundwater. | HRS 30.9 |
| 11. | <u>Belvidere Municipal Landfill #1, Belvidere</u>
PCB and other chemical wastes leaching from improperly covered site posing threat to groundwater. | HRS 28.5 |

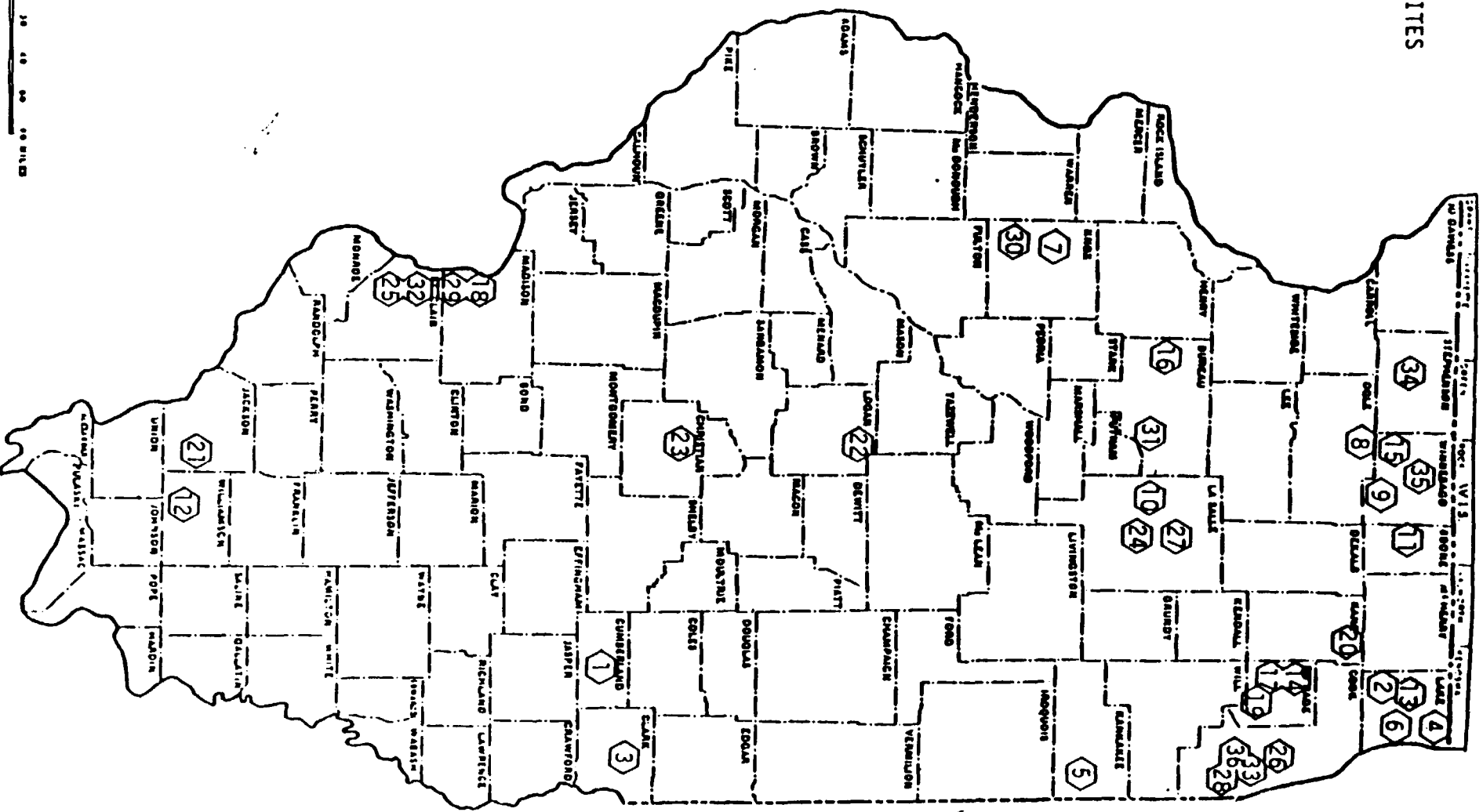
*HRS refers to the U.S EPA Hazard Ranking System used to set priorities for site cleanup.

STATE SITES NEEDING CLEANUP

- | | | |
|------|---|-----------|
| 21. | <u>Koppers Co., Carbondale</u>
Groundwater contamination by chemicals from railroad tie treating operations. | HRS 15.1 |
| 22. | <u>Hopkins Chemical Co., Atlanta</u>
A facility manufacturing agricultural pesticides which have contaminated plant, surrounding grounds and groundwater. | HRS 23.99 |
| 23. | <u>Taylorville Landfill, Taylorville</u>
Exposed wastes leaching into a floodplain. | HRS 21.2 |
| 24. | <u>Luminous Processes, Ottawa</u>
Radioactive material in a closed radium watch dial factory building. | HRS 20.7 |
| 25. | <u>Dead Creek, Cahokia</u>
A 40 year dumping ground for a variety of wastes with a history of causing animal skin burns. Tests indicate high levels of PCB's and other hazardous wastes. | HRS 18.4 |
| ✓26. | <u>U. S. Drum, Chicago</u> <i>1 1/2 mi West of LAKE CALUMET - S Chicago</i>
Once a solvent recovery operation, unrecoverable wastes were dumped on the ground contaminating ground and surface waters. | HRS 18.01 |
| 27. | <u>Brockman #1, Ottawa</u>
Hazardous wastes buried at the site are leaching into the groundwater. | HRS 15.1 |
| 28. | <u>Calumet Container Corp., Hammond-Chicago</u>
Chemical wastes leaching into ground from drum recycling operation. | HRS 10.71 |
| 29. | <u>LaMear Landfill, Fairmont City</u>
Abandoned drums along the Cahokia Canal that contain phenols. | HRS 10.3 |
| 30. | <u>Steagel Landfill, Galesburg</u>
A private landfill which accepted hazardous wastes until its closure in 1974. Wastes are presently leaching into a nearby stream. | HRS 8.7 |
| 31. | <u>New Jersey Zinc, DePue</u>
A 15-acre pile of tailings from zinc processing plant leaching into a ditch that drains into Lake DePue. | HRS 8.6 |
| 32. | <u>Monsanto Chemical Disposal Site, Sauget</u>
Closed toxic waste disposal site leaching chemicals into the Mississippi River. | HRS 7.2 |
| 33. | <u>U. S. Scrap, Chicago</u>
An abandoned site containing a large number of drums of chemical wastes. | HRS 5.9 |

ILLINOIS CLEANUP SITES

0 10 20 30 40 50 MILES



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: MAY 18 1984

SUBJECT: Project Status Reports

FROM:  Richard E. Bartlett, Chief
Remedial Response Branch

TO: OSCs

Attached for your information and review are current project status reports. These status reports are current through May 11, 1984. This report also reflects current workplan requests. Following is a summary of our projects by category.

RAMPs

Completed	41
Draft Received	16
Contractor Start-up	0
New Requests	0
Postponed	0

CRPs

Completed	11
Activities On-going	11
Contractor Start-up	12
New Requests	0

RI/FSs

Activities On-going	35
Start-up/Postponed	2/1
New Requests	6

Enforcement Support

Completed	5
On-going	3
Start-up	0

IRMs

Completed	2
On-going	1
Contract Start-up	0
New Requests	1

-2-

Quality Assurance

Contract Start-up 1

Please notify Mary Ryan if changes are necessary.

Attachment

cc: Richard Bartelt
Gregory Vanderlaan
Russell Diefenbach
Thomas Mateer
Kathy Brown
John Perrecone
PSS Staff

RAMP STATUS

<u>Completed</u>	<u>Draft Received</u>	<u>Contractor Start-up</u>	<u>W.A. Issued: Date</u>	<u>Due Date</u>	<u>Requested by Region/Date¹</u>	<u>Due Date</u>
<u>ILLINOIS</u>						
Acme Solvents A&F Materials, Greenup Byron Salvage Yard Galesburg/Koppers LaSalle Elect. Ut. Johns-Manville Outboard Marine Corp. Wauconda Sand & Gravel	Belvidere Landfill					
<u>INDIANA</u>						
Envirochem Lake Sandy Jo Marion/Bragg Dump Neal's Landfill Wayne Waste Oil	Lemon Lane Landfill Midco I					
<u>MICHIGAN</u>						
Anderson Development Butterworth Landfill Charlevoix Mun. Well Forest Waste Disposal G&H Landfill Ionia City L.F. Liquid Disposal, Inc. Northernaire Rasmussen L.F. Rose Township Dump Spiegelburg Landfill Springfield TWP Dump Tar Lake Verona Well Field	Auto Ion Cemetery Site (Revised) Duell & Gardner K & L Landfill Wash King Laundry					

<u>Completed</u>	<u>Draft Received</u>	<u>Contractor Start-up</u>	W.A. issued: Due <u>Date</u> <u>Date</u>	<u>Requested by Region/Date</u> ¹	<u>Due Date</u>
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MINNESOTA

Burlington Northern R.R. LeHillier	New Brighton/ Arden Hills South Andover Waste Disposal Engineering (Weston)				
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OHIO

Allied Chemical & Ironton Coke Arcanum Iron & Metal Big D Campground Bowers L.F. Coshocton City L.F. Fields Brook New Lyme Laskin/Poplar Oil Old Mill Pristine Summit National	Buckeye Reclamation Fultz Landfill E.H. Schilling Skinner Landfill Van Dale Junkyard				
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WISCONSIN

Mid State Landfill					
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¹ Not yet initiated by Contractor.

CRP STATUS

Completed	Products Received to Date: Site/Products	Contractor Start-up	W.A. Issued: Date	Due Date	Requested by Region	Start Date	Due Date
<u>ILLINOIS</u>							
OMC							
Kerr McGee							
Wauconda Sand & Gravel	OMC: Community Relations Implementation Activities: Transcript of Public Hearing Summary of Comments received on feasi- bility study Additional press releases, etc.						
<u>INDIANA</u>	Lake Sandy Jo: Draft CRP						
		Midco I	1/6/84				
		Midco II	1/6/84				
		Northside	2/2/84				
		Poer Farm	2/2/84				
		Reilly Tar	2/2/84				
		Seymour					
<u>MICHIGAN</u>							
Battle Creek	Cemetery: Draft CRP						
Butterworth	Midland: Draft CRP and Sampling Plans						
Charveloix	Novaco: Draft CRP	PCA	1/6/84				
G & H Land- Fill	Rasmussen: Draft CRP						
Northernaire							
	Rose Township Dump: Draft CRP						
	Spiegelburg: Draft CRP						
	Springfield: Draft CRP						
<u>MINNESOTA</u>	LeHillier: Draft CRP	Arrowhead	1/6/84				

CRP STATUS

Completed	Products Received to Date: Site/Products	Contractor Start-up	W.A. Issued: Date	Due Date	Requested by Region	Start Date	Due Date
<u>OHIO</u>							
Arcanum		Allied	12/22/83				
Chem-Dyne		Bowers	12/22/83				
New Lyme		Miami Co.	1/6/84				
		Pristine					
<u>WISCONSIN</u>	Mid-State						
<u>Other</u>							
Community							
Relations							
Technical							
Assistance							

<u>Completed</u>	<u>Products Received to Date:</u> <u>Site/Products</u>	<u>Contractor Start-up</u>	<u>Issued:</u> <u>Date</u>	<u>Due</u> <u>Date</u>	<u>Requested by</u> <u>Region</u>	<u>Start</u> <u>Date</u>	<u>Due</u> <u>Date</u>
<u>ILLINOIS</u>	Kerr-McGee (RI/FS): Draft Workplan Final Work Plan OMC (FS): Final Work Plan Draft FS Report Health and Safety Plan Technical Memorandum No. 1 - Stating Data Gaps No. 2 - Draft of Remedial Objectives and Criteria No. 3 - Description of Site History, Current Status, and Proposed Response No. 4 - List of Remedial Alternatives Considered and Initial Screening Criteria No. 5 - Technical Memorandum Summarizing Initial Screening and Comparison Final FS Report No. 6 - Technical Memorandum Summarizes Preliminary Testing of Sediment from Waukegan Harbor Summary of Written Comments on Source Control Feasibility Study Source Control Feasibility Study Sketch of Replacement Harbor Letter Summary of Additional Scope Activities Real Estate Appraisal Response to Comments from Lake Michigan Federation Draft Abstract: Source Control FS Summary of Public Comments from Public Meeting Wauconda Sand & Gravel (RI/FS): Draft Workplan Final Workplan Site Safety Plan Remedial Investigation Analysis Report - Draft	Johns-Manville	9/27/83	(On hold)	La Salle Electric		

<u>Completed</u>	Products Received to Date: <u>Site/Products</u>	<u>Contractor Start-up</u>	W.A. Issued: Due <u>D</u> <u>Date</u>	Requested by <u>Region</u>	<u>Date</u>	<u>Due</u> <u>Date</u>
<u>ILLINOIS</u>	Remedial Investigation Data Report Geophysical Studies Report Revised Workplan Residential Well Sampling RI Data Report					
<u>INDIANA</u>	Enviro-Chem (RI/FS): Final Work Plan Final Focused RI/FS Report Project QA Plan Health and Safety Plan Site Definition Summary Report Geohydrogeologic Report Residential Well Inorganic Test Data & Review Comments Technical Memorandum: Hydrogeologic Investigation Technical Memorandum: Residential Well Sampling Site Definition Activities: Technical Memorandum - Groundwater Sampling Site Definition Activities: Technical Memorandum - Surface Water and Sediment Sampling Technical Memorandum - Groundwater Testing Report Lake Sandy Jo (RI/FS): Draft Work Plan Midco I (RI/FS): Draft Workplan Final Workplan Midco II (RI/FS): Draft Workplan Sampling Plan Northside Sanitary Landfill (RI/FS): Draft Work Plan Poer Farm (RI/FS): Draft Workplan Health and Safety Plan Reilly Tar (RI/FS): Background Document					

<u>Completed</u>	<u>Products Received to Date:</u> <u>Site/Products</u>	<u>Contractor Start-up</u>	<u>W.A.</u> <u>Issued: Due</u> <u>Date Date</u>	<u>Requested by</u> <u>Region</u>	<u>Date</u>	<u>Due</u> <u>Date</u>
<u>INDIANA</u> (cont'd)	Seymour (RI) (Headquarters request): Draft Workplan Phase 1 Final Work Plan Draft Site Safety Plan Bid Documents QAPP Sampling Data Inorganic Sample Results Surface Soil Sampling Surface Soil Sampling: Memo on Tracer Compounds					
<u>MICHIGAN</u>	Berlin & Farro (FFS): Draft Work Plan Health and Safety Plan Summary of Preliminary FFS Conclusion Analytical Test Results Draft FFS Final Work Plan Revised Report Final FFS Report Charlevoix (RI/FS): Draft Work Plan Final Work Plan Draft QAPP Health and Safety Plan Memorandum: Alternatives for the FFS Memorandum: Drilling Activities FFS Outline and Draft Section 3.0 and 4.0 Remedial Action Alternatives and Detailed Analyses of the Alternatives FFS: Contaminated Water Supply Cliffs Dow Dump (RI/FS): Draft Work Plan for Phase I Investigation Support and Draft Work Plan for Responsible Parties Draft QAPP Draft Sampling Plan Forest Waste (RI/FS): Draft Work Plan Preliminary Final Work Plan Final Work Plan			Cemetery (RI/FS) Rasmussen (RI/FS) Spiegelburg (RI/FS) Springfield (RI/FS)	2/29/84 2/29/84 2/29/84 2/29/84	

<u>Completed</u>	<u>Products Received to Date:</u> <u>Site/Products</u>	<u>Contractor Start-up</u>	<u>W.A.</u> <u>Issued: Due</u> <u>Da) Date</u>	<u>Requested by</u> <u>Region</u>	<u>Date</u>	<u>Due</u> <u>Date</u>
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Michigan (cont'd)

G & H Landfill (RI/FS):

- Draft Work Plan
- Revised Work Plan
- Residential Sampling Technical
memo and Sampling Plan
- Health Safety Plan
- Project QA Plan
- Review of Geophysical Investigation
Proposal
- Technical Memo No. 2 - Site Investigation
- Sediment Sampling Technical Memorandum
- Surface Water Sampling Technical Memorandum
- Groundwater Sampling Technical Memorandum
- Residential Well Sampling Technical Memorandum
- Hydrogeologic Study Technical Memorandum
- Soil Investigation Technical Memorandum
- Draft Groundwater Study Plan
- Technical Memorandum: Site Investigation -
Soil Sampling
- Technical Memorandum: Site Investigation -
Air Sampling
- Environmental Study Technical Memorandum

Novaco (RI/FS):

- Draft Work Plan
- Health and Safety Plan
- Final Work Plan
- Draft Task Completion Memorandum
for Tasks 1 and 2
- Final Quality Assurance Project Plan

PCA (RI/FS):

- Draft Work Plan
- Revised Work Plan

Verona Well Field (RI/FS):

- Draft Work Plan
- Redrafted Work Plan
- Health and Safety Plan
- Final Work Plan
- Draft Work Plan for FFS
- Draft Work Plan for IRM Design
- Public Meeting Tapes
- Revised Draft Work Plan for RI/FS, and
IRM Design Phase
- Draft Work Plan for IRM - Construction Management Phase

<u>Completed</u>	<u>Products Received to Date:</u> <u>Site/Products</u>	<u>Contractor Start-up</u>	<u>W.A.</u> <u>Issued: Due</u> <u>Date Date</u>	<u>Requested by</u> <u>Region</u>	<u>Date</u>	<u>Due</u> <u>Date</u>
<u>MINNESOTA</u>	Arrowhead (RI/FS): Draft Workplan LeHillier (RI/FS): Draft Work Plan Morris Arsenic (RI/FS): Site Photos Draft Work Plan Draft QAPP Draft Sampling Plan Final Work Plan New Brighton (FFS): Final Work Plan Feasibility Study (Temporary Water Supply) Feasibility Study Revision No. 1 Implementation (Pipeline) Implementation (Carbon System) St. Anthony Alternatives Screening Study Draft Private Well User Feasibility Study Draft Waste Disposal Engineering (RI/FS): Draft Work Plan Health and Safety Plan Final Work Plan					
<u>OHIO</u>	Allied (RI/FS): Health and Safety Plan Final Work Plan Arcanum (RI/FS) Draft Work Plan Preliminary Final Work Plan Bowers (RI/FS): Draft Work Plan Health and Safety Plan Chem-Dyne (RI/FS): Field Work Schedule Final Work Plan Preinvestigative Support Report (letter) Quality Assurance Project Plan Health and Safety Plan Soil Sampling Plan			Pristine	(RI/FS)	

<u>Completed</u>	Products Received to Date: <u>Site/Products</u>	<u>Contractor Start-up</u>	W.A. Is) Date	d: Due Date	Requested by <u>Region</u>	<u>Date</u>	Due <u>Date</u>
<u>OHIO (cont'd)</u>	Draft Fish, Water and Sediment Sampling Plan Geophysical Investigation Site Investigation Technical Memos - Phase I and II and III Technical Memos: Initial Groundwater, Soil, and Surface Water and Sediment Investi- gation, Phase I; Monitoring Well and Production Well Sampling, Phase II; Surface Water and Sediment Sampling, Phase II; Fish Tissue Sampling, Phase II; Monitoring Well and Production Well Sampling, Phase III; Evaluation of Treatment and Disposal of Ground- Water Produced During Pump Test; Split Spoon Sampling and Groundwater Monitoring Installation, Phase II; Groundwater Monitoring Wells and Pumping Well Installation, Phase III; Surveying and Mapping; Final Soil Investigation - Test Pits Onsite/Offsite Appendix C - Inventory of Active and Abandoned Production Wells in Vicinity of Chem-Dyne Review of existing Information Facilities Inventory Draft Task Completion Memorandum for Tasks 1 & 2 (Remedial Alternatives Preliminary Assessment and Remedial Investigation Analysis) Draft RI Final Report Interim Final FS Guidance Document Summary Table of Tentative Identified Compounds in RI Samples Modifications of FS Study Schedule and Deliverables Interim Final RI Sampling of Groundwater & Soil from Private and City Property Listing CLP Data						

<u>Completed</u>	<u>Products Received to Date:</u> <u>Site/Products</u>	<u>Contractor Start-up</u>	<u>W.A.</u> <u>Issued: Due</u> <u>Date Date</u>	<u>Requested by</u> <u>Region</u>	<u>Date</u>	<u>Due</u> <u>Date</u>
<u>OHIO</u> (cont'd)	Coshocton (RI/FS): Draft Work Plan Final Work Plan Health and Safety Plan Draft QA Project Plan Draft Sampling Plan Final Sampling Plan Inorganic Analysis Organic Analysis E.P. Tox Data Organic Data Back-up Data for Drilling Services Technical Memorandum: Hydrogeologic Investigation Topo Map Slides Technical Memorandum: First Round Sampling Drilling BOA Technical Memorandum: Surface Water and Sediment Testing Technical Memorandum: Soil/Leachate Testing Technical Memorandum: Groundwater Testing Sampling Requests Second Sampling Episode Sampling Plan Laskin/Poplar (RI/FS): Draft Work Plan Final Work Plan Draft QA Project Plan Health & Safety Plan Geophysical Survey Focused RI/FS - Liquid Removal Air Monitoring Results Liquid Removal Endangerment Assessment Draft Sampling Plan Final Focused RI/FS Final RI/FS Risk Assessment: Posed by Laskin Poplar Site to Ohio - Water Service Plant FFS and Current Final Report Liquid Removal					

<u>Completed</u>	<u>Products Received to Date:</u> <u>Site/Products</u>	<u>Contractor Start-up</u>	<u>Issued: Due</u> <u>Date</u>	<u>Requested by</u> <u>Region</u>	<u>Date</u>	<u>Due</u> <u>Date</u>
<u>OHIO Cont'd</u>	<p>New Lyme (RI/FS):</p> <ul style="list-style-type: none"> Quality Assurance Project Plan Draft Workplan Draft Sampling Plan Changes to Draft Work Plan Final Work Plan Health and Safety Plan Quality Assurance Plan Final Sampling Plan Waste Manifests Topo graphic map Geophysical Survey Technical Memorandum <p>Fields Brook (RI):</p> <ul style="list-style-type: none"> Final Work Plan Health & Safety Assessment and Plan QA Plan Final Phase I Sampling Plan Final Phase I Field Sampling Plan QA Project Plan for the Field Investigation Site Safety Plan Phase I Sampling - Completed Preliminary Assessment - Finalized Draft Phase II - Sampling Plan <p>Old Mill (RI/FS):</p> <ul style="list-style-type: none"> Draft Work Plan QA Project Plan for the Field Investigation Health and Safety Plan for Site Work Final Work Plan Draft Sampling Plan QAPP Final Sampling Plan Geophysical Survey Technical Memo Sampling Responsibility Health and Safety Amendment Proposal to Install Wells Topographic maps Revised project schedule and deliverables Memorandum: Disposal of On-site Generated Waste Field Trip Summary 	Miami Co.				

<u>Completed</u>	<u>Products Received to Date:</u> <u>Site/Products</u>	<u>Contractor Start-up</u>	W.A. <u>Issued: Due</u> <u>Date Date</u>	<u>Requested by</u> <u>Region</u>	<u>Date</u>	<u>Due</u> <u>Date</u>
<u>OHIO</u> (cont'd)	Summit National (RI/FS): Final Draft Work Plan QAPP and Sampling Plan					
<u>WISCONSIN</u>	Mid-State (RI/FS): Health and Safety Plan Draft Workplan Final Workplan					

<u>Completed</u>	<u>Efforts On-going: Site/Activity</u>	<u>Due Date</u>	<u>Contractor Start up</u>	<u>W.A. Issued: Date</u>	<u>Due Date</u>	<u>Requested by Region</u>	<u>Start Date</u>	<u>Due Date</u>
<u>ILLINOIS</u>								
	OMC Kerr-McGee							
<u>INDIANA</u>								
	Seymour Recycling ¹ : Selection of firm to conduct remedial action Measurement of Water Levels and of Stream Discharge - (Technical Memorandum 1 and 2) Revised Draft Workplan Water levels measured in 18 monitoring wells - report submitted Report on Monitoring Well Samples and Water Level Measurements & Residential Well Sampling and Stream Discharge Measurements Residential Well Samples (Technical Memorandum 3, 4, 5, 6, 7, 8 and 9)							
<u>MICHIGAN</u>								
Ott/Story/ Cordova	LDI: Final Work Plan Reproduce documents Review of draft QAPP for the Hydrogeologic Investigation and Geophysical Surveys							
Velsicol								
<u>MINNESOTA</u>								
Koppers Coke	Reilly Tar: St. Louis Park Groundwater Treatment Final Report							

IRM STATUS

<u>Completed</u>	<u>Efforts On-going: Site/Activity</u>	<u>Due Date</u>	<u>Contractor Start- up</u>	<u>W.A. Issued: Date</u>	<u>Due Date</u>	<u>Requested by Region</u>	<u>Start Date</u>	<u>Due Date</u>
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MINNESOTA

New Brighton

OHIO

Chem-Dyne:
restoration of
N & WRR Line

ILLINOIS

A&F

Draft and Final Work Plan
Assignment cancelled due to
Consolidation with emergency
action

MICHIGAN

Forest Waste 2/29/84

) QUALITY ASSURANCE STATUS)

<u>Completed</u>	<u>Efforts on-going: Site/Activity</u>	<u>Due Date</u>	<u>Contractor Start-up</u>	<u>WA Issued: Date</u>	<u>Due Date</u>	<u>Requested by Region</u>	<u>Start Date</u>	<u>Due Date</u>
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Implementation
of Region V
QA Program for
State-Lead
Superfund Projects

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO:	Ken Roberts 303/978-3120	FROM:	Johns-Manville (Denver)
		DATE	10-15-84
		TIME	9:15 Am
SUBJECT Johns-Manville Site			
SUMMARY OF COMMUNICATION			
<p>Ken Roberts from the office of Johns-Manville at Denver called to inform me that Ontario Research, would send an Eric Chatfield down to Waukegan, Ill. to do some air monitoring. Ken said he would replace Dr. Leineweber. Ken wanted to know if Ontario Research's protocol was in proper guidance. He said he would send me a copy of it.</p>			
<p style="text-align: right;">Rodney G. Gaither</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
<p> </p>			
INFORMATION COPIES			
TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____	
		(Record of item checked above)	
TO: Jim Whipple 303/978-3750		FROM: Johno-Manville (Denver)	
SUBJECT: Johno-Manville Site		DATE: 10-15-84	
		TIME: 9:25 AM	
SUMMARY OF COMMUNICATION			
<p>I returned Jim Whipple's call to briefly discuss the fact, that Eric Chatfield from Ontario Research, would be doing some sampling (and) in Waukegan, Ill. on the week of Oct. 15, 1984. Jim Whipple is the person in charge of the Geohydrological and Technical tests. He informed me that a Ken Roberts would take the place of Dr. James P. Leinenweber, who was out on medical call.</p> <p style="text-align: right;">Rodney G. Gaither</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE	
		<input type="checkbox"/> OTHER (SPECIFY) _____ (Record of item checked above)	
TO: Eric Chatfield 416/822-4111		FROM: Ontario Research	
SUBJECT Johns-Manville Site		DATE 10-15-84	
		TIME 9:40 AM	
SUMMARY OF COMMUNICATION <p>Eric Chatfield said he would drive down from Canada on 10-16-84. He said he would view the site and figure out the flow rate possibly on Wednesday 10-17-84. He said would try and start the Pre-Sampling Test on Thursday 10-18-84. Eric said he would sample for maximum flow rate.</p> <p style="text-align: right;">Rodney H. Gaithe</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY)	
		(Record of item checked above)	
TO:	Michael Debrish 312/623-2900	FROM:	Johns-Manville (Waukegan)
		DATE	10-15-84
		TIME	9:50 AM
SUBJECT Johns-Manville Site			
SUMMARY OF COMMUNICATION			
<p>Michael Debrish said he wasn't for sure if Eric Chatfield from Ontario Research would start air sampling on 10-17-84 or 10-18-84. He told me he would inform me on what day the sampling would begin.</p>			
<p style="text-align: right;">Rodney G. Gistler</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
<p>1</p>			
INFORMATION COPIES			
TO:			

Date: October 26, 1984
 Subject: Observation of Air Monitoring Activities at the Johns-Manville Site on October 23, 1984.

From: Bill Mains
 To: Russ Sigurdson

Purpose: To meet the contractors hired by Manville (Ontario Research, Toronto) and observe the start of the air monitoring study called for in the 106 Order Exhibit 1

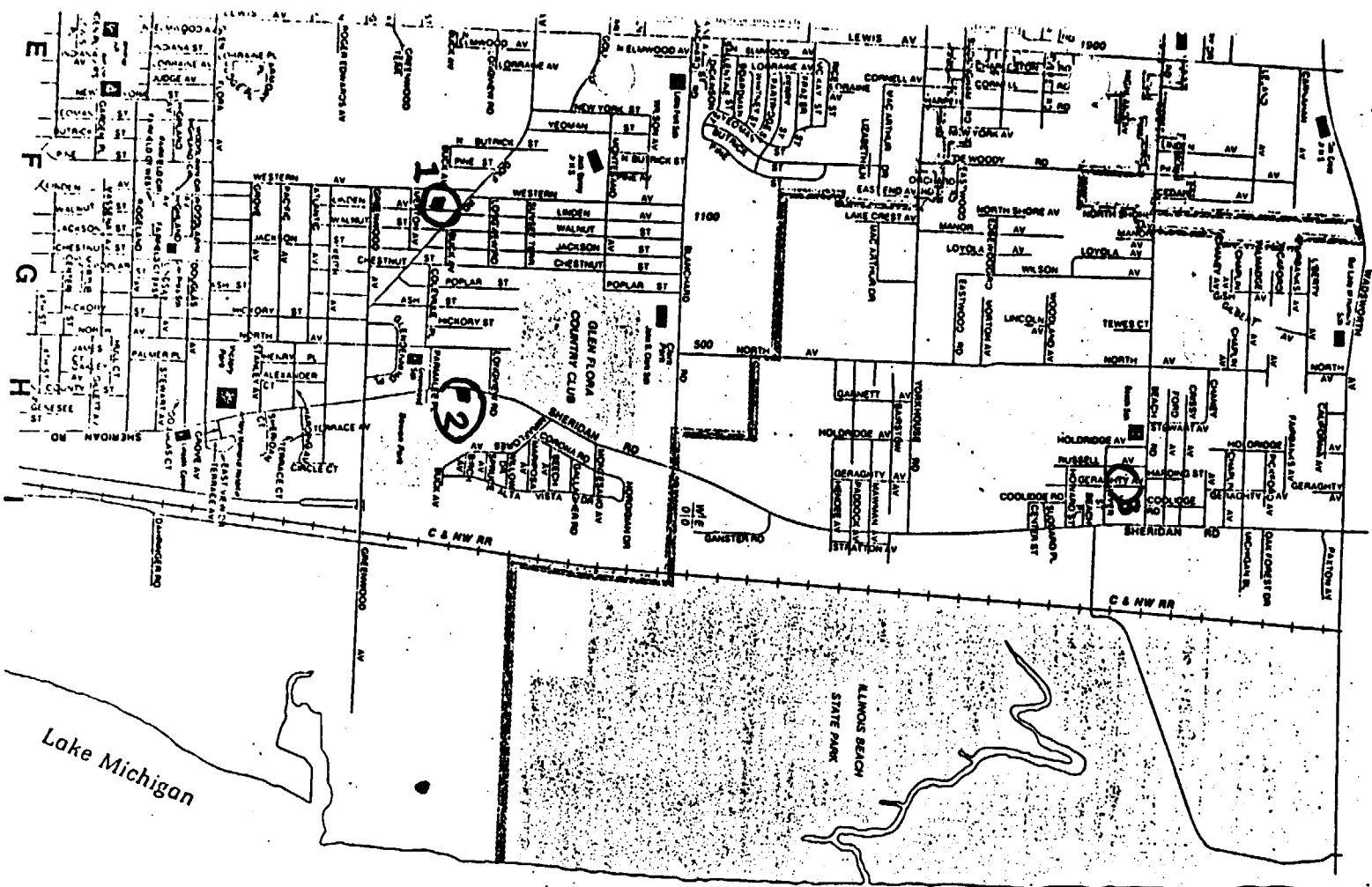
Attendees:
 Bill Mains
 Russ Gaultney
 Eric Clutfield
 Lotman Decker
 Mike Debus
 Johns-Manville
 Ontario Research, Toronto
 EPA
 EPA

Discussion: Bill Mains arrived at the site a little after 7 am. and was met by Mike Debus. Mains gave a tour of the on-site monitoring stations. Mains and Debus picked up Gaultney and visited the three background sites (the Consent Order only requires one). The background sites were a residential back yards and appeared to be free of asbestos contamination. Since these sites were all Manville employees' homes, a surprise could be possible. Following to the plant, EPA personnel met the contractors. Sampling methods and set up were discussed. EPA accompanied the monitoring contractors on a tour of the plant.

stations. Maps of the locations are attached. Mains returned a phone call from Manville - Denver while at the plant.

Mains decided to allow the contractor to take advantage of the spell of good weather Oct 22-24 by allowing the contractor to proceed directly with sampling. The Exhibit 1 calls for a pre-test to determine the best sampling rates - 5, 10, or 15 liters of air per minute. The contractor was allowed, based on his experience, to choose a rate (he chose 15 lpm) to sample on Tuesday and Wednesday after the Monday pre-test. This got 2 of the five days done.

ZION



#1 MAYNARD PARKER
1916 LINDEN AVE
WAUKEGAN, IL

#2 PEGGY GANN
SHERIDAN
WAUKEGAN, IL 17

#3 JACK RYAN
38286 GERAGHTY AVE
WAUKEGAN, IL 16

1. DEPARTMENT OR ESTABLISHMENT, BUREAU, DIVISION OR OFFICE
US EPA Waste Mgt Division
RRB RRS II

3. SCHEDULE NUMBER

5. PAID BY

CLAIMANT:

Mains, William D.

495-60-6764

421 Ph. Hippa St

886-3009

Hinsdale IL 60521

[illegible]

If additional space is required continue on the back.

**SUBTOTALS CARRIED FORWARD FROM THE
BACK**

7. AMOUNT CLAIMED (Total of cols. (f), (g) and (i).) ▶ \$ 21.26

TOTALS

1886

240

10. I certify that this claim is true and correct to the best of my knowledge and belief and that payment or credit has not been received by me.

Sign Original Only

CLAIMANT SIGN HERE William D. Mans | DATE 10/25/89

**APPROVING
OFFICIAL
SIGN HERE**

9. This claim is certified correct and proper for payment.

Sign Original Only

**AUTHORIZED
CERTIFYING
OFFICER
SIGN HERE**

ACCOUNTING CLASSIFICATION

FTGB 05 ~~FA5~~
4

Date: 10/5/84
Subject: Status of Johns-Manville Hydrogen LI Project
From: Bill Mains
To: Russ Diefenbach

The initial RI field work at the Manville site was performed by two subcontractors of the main Manville contractor KMA Incorporated. The subcontractors were Construction Testing and Inspection Inc (CTI) of Ann Arbor and Aqua-Tech of Grand Rapids. CTI was the driller and Aqua-Tech was the geologist. The attached site maps show the day each soil boring or well installation was done. A summary is below.

OSC Progress

- | | |
|--------|---|
| 9/10 | Aqua-Tech and CTI travel to the site |
| * 9/11 | CTI/A-T get a slow start, do 1 st sludge pit boring |
| * 9/12 | 2 nd sludge pit boring and boring in active disposal area
borings go easily with some trouble getting split-spoon
samples sometimes due to softening of material on plugging
of spoon |
| 9/13 | 2 leyson area borings |
| * 9/14 | 1 leyson area boring - some pipe voids encountered. |
| 9/17 | 2 borings |
| * 9/18 | 1 boring, 2 wells installed |
| 9/19 | 3 wells installed Mark Vanell present |
| | end of CTI work |
| 9/25 | A-T travel to site, water levels in wells taken (alluvium) |
| * 9/26 | water levels at all wells taken, hydraulic testing
of wells, water samples taken at 2 wells |

* 9/27 water level at all well taken, water sampling performed

Overall the borings were not difficult, and the monitoring wells were easy to install. The monitoring wells all consisted of 10' of PVC casing and 5' of PVC screen. The water levels were 2-4 feet deep. The wells were initially developed using the drill rig mud pump at almost 6 gallons per minute until the water was clear. Of course, the wells were not clear when bailed for water samples which occasioned a large amount of time being spent filtering samples for some parameters through a 0.45 μ m filter.

Water samples were all taken in duplicate as follows:

1 gal	glass amber	no preservative	particulates etc
500 ml	plastic	n.p.	asbestos
500 ml	plastic	2 ml 11% H_2SO_4	NH_3 , TOC
500 ml	plastic	n.p.	S^{2-}
500 ml	plastic (f. head)	2.5 ml 2N NaOH	Cu^{2+}
500 ml	plastic (f. head)	1.5 ml HNO_3	metals
500 ml	plastic (f. head)	2 ml $HNO_3/K_2Cr_2O_7$	Hg
40 ml	glass clean	n.p.	VOA

Water samples were iced and driven to the laboratory.

Soil samples were collected at the base of boring and placed in glass jars. Samples were iced and driven back to the laboratory, or Aqua-Tek.

Hydraulic conductivity data was collected using a ~~vacuum~~^{va} pump, pressure transducers, an ~~analog~~^{analog} to digital converter, and a Commodore VIC-20. A valving set-up was inserted in the top of the well casing which allowed the pump to bring a 24" or 30" column of water up the casing. The pump was valved off and the water column left to equilibrate. ~~The pressure transducer was originally set about 6" below the static water level.~~ The pressure gauge read in inches of water and was used to observe the integrity of the vacuum. Once the output of the pressure transducer was set within the known dynamic range and about 5 minutes had elapsed another valve released the vacuum and the VIC-20 sampled the output of the pressure transducer at 0.2 sec intervals until well after stability was reached. Each well was done twice at 30" and twice at 24" column. The data was stored on a live disk and an archive disk for later use.

Date: 8/30/84

Subject: Acceptability of QAPP Components Contained in
The 5-m Hydro-geo Workshop (KMA) and QIA
Manual (CAI)
From: Bill Mains
To: File

This is an evaluation of the KMA workshop
and CAI QA manual against the QAPP within the
guidelines (QAMS-005/80) to determine whether the
requirements of the guidelines are met in the workshop
and when.

5.3 Project Description

The project is sufficiently described
in the workshop

5.4 Project Organization and Responsibility

Line authority is shown for non-lab
activities. The laboratory personnel who are
to ensure valid measurement data and routine
assessment of measurement system for precision
and accuracy is not there.

5.5 QA Objectives

CAI QA manual contains some features
of the QAMS that: missing are experimental
conditions, precision std dev, accuracy and comparison.
These values should be the current values for the
lab

5.6. Sampling Procedures

1. Determined in the contract ~~order~~ order
2. Sufficient in the workplace
3. Operation sufficiently described in text
4. Appendix A contains this
5. Contained in Sampling Plan and CAT Manual
6. Preservation methods and holding time are in the CAT manual
7. Not particularly important
8. Chain of Custody covered in CAT Manual and Workplace
9. Shown in CAT manual and Workplace

5.7 Chain of Custody

*

1. Origin of preservation is not specified
2. covered
3. in CAT Manual
4. Sample tag used
5. SHT form used

B Laboratory

1. COC responsible party named: Lead Scientist & alternate
2. In COC sheets shown
3. procedures defined.

5.8 Calibration free of bias

1. ok
2. ok
3. origin of standards is not defined

5.9 Analytical Procedures
 Methods are defined, however the
 method for cadmium and lead are not
 significantly sensitive - the d.l. is at the MCL.
 for the purpose of this review I have
 accepted up to 40% of the MCL as an
 acceptable d.l.

5.10 Data Reduction
 1. Data reduction methods shall be included
 in the draft report where used and will be
 evaluated at that time
 2. Censored records will be the major
 source of information
 3. Outlier methods not discussed
 4. Sample and data flow described in
 work plan and checked on p12 of CAT Manual
 5. Key individuals, at project level, are noted

5.11 Internal QC checks

The items not covered by the CAT
 manual ¹⁵ split sample. ~~split sample~~ ~~split sample~~ ~~split sample~~
 However, split sample are not called for in this project.
 For purposes here I am defining replicates as

the 10% field dup and 10% analytical dup, spikes in
 spikes, control charts in the last 24 of the CAT
 manual, blank in the field blank analyzed, reagent
 check in the reagent blank in the p24 chart,
 QC samples on #1 or p22, summary samples on
 #5 on p22, calibration standards & devices on

5.12 Performance & System Audit

#1 on p 22, and 2000 and spec gases as the gases specified on p 27. Calibration is also dealt with on p 25-26.

Performance audit are described in the context of 5.11. For the purpose of this review, I am considering performance of system audit to be synonymous since it is the system which produces the results which, if not functioning properly, would not produce results within the acceptance limits

5.13 Preventive Maintenance

Preventive maintenance and time to obtain spare parts is not a concern of the CPA for a private laboratory - if the laboratory is so poorly managed that it is not meet its obligations, then that lot as a business is in trouble. No amount of CPA regulation, requirements or hardhats can, or should, be used to carry a lab which should not be one.

5.14/15 Assessment of Precision, Accuracy, and Completeness.

The workshop and CAP Manual do not

contain The procedures to assess data quality. The framework is there, but there is no explanation of how decisions are made (which is 5.15).

5.16 Reports to Management

Again, This is not an item for EPA to be concerned about in the case of a private party RI not using the CLP. If the private lab does not report within itself, that does not affect EPA.

8/31/84

Kumar -

I am addressing a letter to Jim Whipple with a copy to you which will transmit this information more completely & formally.

The major comments that will be in the letter w/respect to the QAPP are:

QA
Guidelines
Section

5.4

1. No laboratory person is designated as responsible for QA (routine assessment of data, methods, and machines).

5.5

2. QA objectives - The CAL manual is lacking good chart by media showing the QA parameters. See Sec 5 of enclosed plan

5.7

3. Origin of preservative stocks not specified

5.8

4. Origin of standards not specified

5.9

5. The Pb and Cd methods listed are not sensitive enough - The detection limit is equal to the drinking water maximum contaminant level. Try for 10-20% of that level

5.10

6. Data reduction methods are not outlined but, can be solely in the RI report if that chance is attractive (I agree that specifying

now could be limiting)

5.10 f. Outlier methods not discussed

5.14 g. Assessment of Precision, accuracy and completeness is not described

5.15 9. No decision parameters or method is advanced to explain how data is determined to be within acceptance limit.

I have enclosed a better sample plan. The one previously sent. This plan had a higher addressum ~~at~~ which is not yet available.

Subject: Johns-Manville RI workplan meeting
From: Bill Mains
To: Russ Diefenbach

Purpose: The meeting was held to go over the draft RI workplan submitted by KMA Inc, covering the hydro/geological portion of the RI.

Attendees: See attached

Discussion: The group went through the draft work plan to make alterations. All State and EPA concerns were agreeably resolved. The remaining questions at the end of the meeting were:

1. Favero would check with State safety people on the proposed method of personal monitoring for asbestos proposed by the Manville hygienist.
2. The quality assurance manual for Canton Analytical Laboratories submitted by KMA to augment the QA section of the workplan will be evaluated by EPA for inclusion in part or in whole.

Subsequent events were that Manville and Illinois Safety/Industrial hygienists were in agreement over how to do personal monitoring for asbestos exposure on the job site, and that action on the QA manual will be delayed until the week of 8/27.

Name	REPRESENTING	Address	Telephone (303)
Stephen Moser	Manville - WHQ Atty	Denver, CO	
David R. Burford	Manville WHQ Dir. Envir Affs	Denver	
James H. Uffipple	Manville WHQ	Denver	978-3750
James H. Scott	Johns Manville plant mgr	Waukegan	312-623-78
W ^m Mains	US EPA	Chicago	312 886-3009
Barbara Mayel	U.S. EPA	Chicago	(312) 353-209
S.K. Malhotra	KMA, INC	GRAND RAPIDS, MICH	(616) 3615092
Michael Delich	CONSULTING ENGINEERS J.M. Waukegan	site co-ord, waste pile operat	
Rick Jonas	J.M. WAUKEGAN	plant engineer	
Mike Carter	J.M. Waukegan	JM HQ Industrial Hygiene	
Chet Werheim	Johns-Manville	Denver Dir of Corp Eng	
David Favero	IEPA RE	Springfield	(217) 722-662
Donald Gumbel	IEPA Atty	May 1222	(312) 345-978

**CLAIM FOR REIMBURSEMENT
FOR EXPENDITURES
ON OFFICIAL BUSINESS**

1. DEPARTMENT OR ESTABLISHMENT, BUREAU, DIVISION OR OFFICE
EPA Waste Management Division
RRB - RRS II

2. VOUCHER NUMBER

3. SCHEDULE NUMBER

Read the Privacy Act Statement on the back of this form.

5. PAID BY

CLAIMANT

a. NAME (Last, first, middle initial)

Mains, William D

b. SOCIAL SECURITY NO.

495-60-674

c. MAILING ADDRESS (Include ZIP Code)

*421 Philippa St
Hinsdale IL 60521*

d. OFFICE TELEPHONE NUMBER

886-3009

6. EXPENDITURES (If fare claimed in col. (g) exceeds charge for one person, show in col. (h) the number of additional persons which accompanied the claimant.)

DATE	CODE	Show appropriate code in col. (b): A—Local travel B—Telephone or telegraph, or C—Other Expenses (itemized) (Explain expenditures in specific detail.)		MILEAGE RATE <i>20.5¢</i>	AMOUNT CLAIMED			
					MILEAGE	FARE OR TOLL	ADD. PER- SONS	TIPS AND MISCEL- LANEOUS
(a)	(b)	(c) FROM	(d) TO	(e)	(f)	(g)	(h)	(i)
<i>8/22</i>	<i>A</i>	<i>residence</i>	<i>Johns-Manville Plant Waukegan IL</i>	<i>46</i>	<i>9.43</i>	<i>1.20</i>		
<i>8/22</i>	<i>A</i>	<i>Johns-Manville Plant</i>	<i>residence</i>	<i>46</i>	<i>9.43</i>	<i>1.20</i>		
		<i>travel was to attend responsible party</i>						
		<i>work plan (RI/E3) meeting</i>						
		<i>cost = \$7.05</i>						

If additional space is required continue on the back.

SUBTOTALS CARRIED FORWARD FROM THE BACK

7. AMOUNT CLAIMED (Total of cols. (f), (g) and (i)) \$ *21.26*

TOTALS

18.86 2.40

8. This claim is approved. Long distance telephone calls, if shown, are certified as necessary in the interest of the Government. (Note: If long distance calls are included, the approving official must have been authorized, in writing, by the head of the department or agency to so certify (31 U.S.C. 680a).)

Sign Original Only

10. I certify that this claim is true and correct to the best of my knowledge and belief and that payment or credit has not been received by me.

Sign Original Only

CLAIMANT
SIGN HERE

William D Mains

DATE

8/23/84

11.

CASH PAYMENT RECEIPT

a. PAYEE (Signature)

b. DATE RECEIVED

c. AMOUNT

\$

12. PAYMENT MADE
BY CHECK NO.

APPROVING
OFFICIAL
SIGN HERE

9. This claim is certified correct and proper for payment.

Sign Original Only

AUTHORIZED
CERTIFYING
OFFICER
SIGN HERE

DATE

DATE

ACCOUNTING CLASSIFICATION



Johns-Manville

Internal Correspondence

To: L. Austin - Site Manager/
Safety Officer

Date: September 17, 1984

From: C. M. Carter - Waukegan

Copies: D. R. Christensen 1-06
J. H. Scott - Waukegan

D. Burford 1-06
M. Debish - Waukegan

Subject: ASBESTOS MONITORING OF PROJECT TEAM
WAUKEGAN WASTE DISPOSAL SITE

The geotechnical and hydrogeologic investigation of the Waukegan waste disposal site began on September 10, 1984. The first core samples were taken on the afternoon of the 11th. Several members of the project team were sampled to determine their occupational exposure to asbestos. The analytical method followed was P&CAM 239 from the NIOSH Manual of Analytical Methods. The federal permissible exposure limit (PEL) for airborne asbestos fiber is 2.0 fibers per cubic centimeter of air. The results of the samples are as follows:

SAMPLE DATE	STATION	RESULT F/cc	PEL F/cc
9/11/84	SPD-102YM Personal - Geologist	<0.1	2.0
		<0.1	2.0
		<0.1	2.0
		0.1	2.0
	SPD-103YM Personal - Drilling Tech.	<0.1	2.0
		<0.1	2.0

During the samples on 9/11/84 a soil boring was taken from the west end of the sludge disposal pit.

9/12/84	SPD-102YM Personal - Geologist	<0.1	2.0
		0.1	2.0
		<0.1	2.0
		<0.1	2.0
9/12/84	SPD-103YM Personal - Drilling Tech.	<0.1	2.0
		0.1	2.0
		0.1	2.0
		N.D.	2.0
		<0.1	2.0

N.D. - No Asbestos Fiber Detected On Sample

On 9/12/84 operators took borings at two locations. Samples were taken while working in the east end of the sludge disposal site and in the active scrap disposal area.

**Asbestos Sample Results
Waukegan Waste Disposal Site
Page 2**

9/13/84	SPD-101YM	Area - Work Site	<0.1	2.0
	SPD-102YM	Personal - Geologist	<0.1	2.0
	SPD-103YM	Personal - Drilling Tech.	<0.1	2.0

Operators were monitored while boring at the south west corner of the settling basins.

9/14/84	SPD-102YM	Personal - Geologist	0.4	2.0
	SPD-103YM	Personal - Drilling Tech.	0.1	2.0

Operators were monitored while boring at the north end of the flexboard ditch. This is the last site in the active disposal area. The higher result on the geologist is due to the dryer conditions of the core samples being obtained and processed.

One work practice was noticed that contributed to this operators exposure. After several samples had been processed a brush was used to clean off the tailgate of the truck being used as a work surface. This caused visible airborne dust to be generated. The tailgate should be washed down with water when cleaning.

9/17/84	SPD-102YM	Personal - Geologist	<0.1	2.0
	SPD-103YM	Personal - Drilling Tech.	<0.1	2.0

These samples were taken while boring at the first site off of the active landfill. Based on these results and observed conditions at the off-site wells and boring locations, the mandatory use of respiratory protection need not be required.

Representative asbestos monitoring will be continued throughout the rest of the operation to document exposure conditions.

Heidengang/Hains

WORK ASSIGNMENT

W65903
SPM L. Martin/640
RECEIVED
JUL - 3 1984
J Med/Hains

A. Contractor: CH2M Hill
1941 Roland Clarke Place CH2M HILL/WDC
Reston, VA 22091

B. Contract Number: 68-01-6692

C. SITE/TITLE: JOHNS MANVILLE, IL

(COMMUNITY RELATIONS PLAN)

D. Assignment Number: 07.5VA5.0

W65903

E. Statement of Work:

F. Level of Effort (Work hours): 60

G. Period of Performance: 1 MONTH

\$3000

Contracting Officer: Dorothy Tyler Phone: 382-3199
Environmental Protection Agency (PM-214-F)
401 M Street, S.W.
Washington, D.C. 20460

Contracting Officer Approval

Date

7/3/84

Project Officer: Paul Nadeau Phone: 382-2339
Environmental Protection Agency (WH-548E)
401 M Street, S.W.
Washington, D.C. 20460

Signature

Date

6/21/84

Deputy Project Officer: Nancy Willis Phone: 382-2339
Environmental Protection Agency (WH-548E)
401 M Street, S.W.
Washington, D.C. 20460

Signature

Date

6/18/84

Headquarters Contact

Regional Site Project Officer

Tony Diecidue
EPA (WH-548E)
401 M Street, S.W.
Washington, D.C. 20460
Phone: 382-4632

Signature

Date

6/18/84

Tom Sheckells, Chief, Remedial Action Branch

TS Sheckells

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
PRELIMINARY ACTIVITIES RESPONSIBLE PARTY INFORMATION SAMP OR SWA COMMUNITY RELATIONS AGREEMENT <i>EPA</i> PENDING LEAD-UP <i>EPA</i>													
OTHER FEDERAL AGENCY ACTION OTHER FEDERAL AGENCY ACTION													
REMOVAL REMOVAL INVESTIGATION REMOVAL ACTIVITY REMEDIAL - ITH - OPERABLE UNIT ONE - RL/PB - RL/NA - OPERABLE UNIT TWO - RL/PB - RL/NA - OPERABLE UNIT THREE - RL/PB - RL/NA													
OPERATIONS & MAINTENANCE COMMUNITY RELATIONS COP DEVELOPMENT PUBLIC COMMENT REP. EVALUATION INVESTIGATION/ACT REPAIR													
REMOVAL ENFORCEMENT NOTICE LETTERS REMOVAL ORDER RESPONSIBLE PARTY CLEAN-UP NEGOTIATIONS REMEDIAL ENFORCEMENT - RI ORDER FFS - RL/PB ADDRESSING NOTICE LETTERS REMEDIAL ORDER/REV. ACTION RESPONSIBLE PARTY CLEAN-UP COST RECOVERY DEMAND LETTER CIVIL ACTION OTHER OTHER													

SITE MANAGEMENT PLAN
JOHN'S MINNIEVILLE - LAURENSIAN, IL
LEADS USE EPA
CONTACT BILL MAINS
TELEPHONE # 886-3007

LEGEND
DELIMITATION PLANNED-ACTUAL
REGULATION
COMPLETE
CALCULATION
OTHER

CONCRETE ENFORCEMENT LEAD

JUL 5 1985

Stephen V. Moser, Esq.
Manville Corporation
Ken-Caryl Ranch
Post Office Box 5108
Denver, Colorado 80217

Re: Johns-Manville Sales Corporation, Docket No. V-W-106-5

Dear Mr. Moser:

I am in receipt of your letter dated June 20, 1985, to Rodney Gaither, On-Scene Coordinator. As indicated to you by Rodney Gaither on June 20, 1985, the U.S. Environmental Protection Agency, Region V, (U.S. EPA), is denying your request for additional time in which to submit a final Remedial Investigation ("RI") Report. Accordingly, the final RI Report is due on June 24, 1985. Your letter states that approximately two additional weeks will be necessary because of "the length of U.S. EPA's preliminary comments and the mechanical difficulties in coordinating our consultants' review." At the time U.S. EPA initially agreed to a modification of the Consent Agreement to allow submittal of a draft RI Report followed by a final report, it was understood by all concerned that the "length" of U.S. EPA's comments would be directly related to the quality of the draft Report, a condition entirely within the control of Johns-Manville. At that time it was also understood and agreed to by Johns-Manville that the final Report would be due within two weeks of receipt of the Agency's comments on the draft Report. We can find no reason to alter that agreement now. In accord with paragraph VI of the Consent Agreement you are hereby notified that Johns-Manville is late in submitting the final Remedial Investigation Report.

I understand that Johns-Manville may dispute certain of the Agency's comments relating to additional study required at the site. I expect this issue to be addressed in your response in accordance with the Dispute Resolution provision (paragraph V) of the Consent Agreement.

Very truly yours,

Babette J. Neuberger
Assistant Regional Counsel

cc: Rodney Gaither, On-Scene Coordinator

bcc: Hagel/Cade/Smith/Schaefer
Gaither/Diefenbach/Niedergang
PNeuberger/ic:6-6850:7-5-85

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

TO: Rodney H. Gaither,
U.S. EPA

FROM: Kumar Malikotra,
(KMA)

DATE: 7-3-85

TIME: 4:10 pm

SUBJECT: Johns-Manville Corporation.

SUMMARY OF COMMUNICATION

Kumar called me and stated the following:

- o He will send (5) copies of the final RI reports along with (3) copies of a letter response addressing U.S. EPA's comments.
- o He will probably be out of town when the air monitoring for Pb will take place (7-29-85). Therefore, Larry Austin, geologist, will be present.
- o Clayton Environmental Services from Michigan will be the contractors for the Pb testing.
- o Clayton Env. Serv. and Larry Austin have my telephone number to keep me abreast of anything.
- o Kumar will submit additional H₂O results at same time of submittal of Pb results. This is because additional H₂O samples will be taken at same time of Pb monitoring.

ENCLOSURE ACTION TAKEN OR REQUIRED

o Clayton Env. Serv. will go out on-site the week of July 8, 1985, to select proper stations for Pb monitoring.

o The results should be submitted by 7-15-85.

o The site will probably be:

A. Top soiled C. Sprinkler system added
B. Graded D. Seeded

INFORMATION COPIES

D.

o There should probably be a meeting concerning these things.



• ENGINEERS • CONSULTANTS • PLANNERS •

KUMAR MALHOTRA & ASSOCIATES INC.

3000 East Belt Line N.E.
Grand Rapids, Michigan 49505
Telephone (616) 361-5092

June 24, 1985

Mr. Rodney Gaither
Project Coordinator (RPM) 5HE-12
USEPA, Region V
230 S Dearborn Street
Chicago, Illinois 60604

Re: Johns-Manville Waukegan Area RI/FS
(Additional site investigations in response to Draft RI Review Comments)

Dear Mr. Gaither,

This letter is to confirm our discussions on the following two tasks which involve additional site investigations. The data obtained through these tasks will be used to prepare responses to some of your review comments (items 3, 5 and 6 on page seven) on the draft RI report. These responses will be summarized in a technical memorandum and submitted for your review.

1. ANALYSIS OF COMMON INORGANIC ANIONS IN THE GROUND WATER.

As indicated by you, the purpose of the anion analysis of the ground water is to correlate if possible the ground water movement directions obtained by using temperature and elevations data with those obtained using major anion levels. Therefore, anions which are normally present in relatively large concentrations will be used to estimate ground water movement directions at the site. We propose to use the following measurements for this purpose.

Chlorides
Sulfates
Total alkalinity
Specific conductance

*Nitrates
Carbonates*

We propose to analyze the ground water and Lake Michigan shore water samples for anions. The second set of samples which were collected on April 29 and 30, 1985 for asbestos analysis (as discussed in June, 1985 technical memorandum No. M-I) will be used for the anion data.

The results obtained will be used to plot ground water movement directions and compare with those obtained through the use of ground water temperature and elevation data.

Mr. Rodney Gaither
June 24, 1985
Page Two

2. ON-SITE LEAD CONCENTRATION IN AIR

According to my discussion with you on the details of air sampling and to meet the intent of 40 CFR 50.12 on Ambient Air Lead concentrations, KMA proposes to sample air at eight locations (see attached figures 1 & 2 for on-site and off-site locations) on three different days, each for a period of 24 + hours. Air will be sampled according to the procedure outlined in Appendix G referred to in 40 CFR 50.12. In addition a portable wind vane and anemometer will be used at each location to obtain wind direction and wind velocity. If 0.10 inch of precipitation or more occurred during any test run, then that test run will be repeated after a waiting period of at least 24 hours. Standard high volume air samplers with glass fiber filter will be used. The air volume will be between 39 cfm ($1.1 \text{ m}^3/\text{min}$) and 60 cfm ($1.7 \text{ m}^3/\text{min}$).

The air filter will be the standard recommended for total suspended particulate matter (TSP) which has 99% capture efficiency to retain particles of 0.3 gm diameter at $1.5 \text{ m}^3/\text{min}$ air rate. Air temperature and pressure will also be recorded at each location. The air flow rate for each sampler will be calibrated regularly and recorded in a log book. The wind velocity and direction observations will be made three times during each test run. The sampling filters will be analyzed for lead using the USEPA recommended procedure. Blank filters and duplicators will be analyzed for quality control.

July 29 The field activities will be conducted during the first two weeks of August, 1985 and will be coordinated with you so that you could witness some of the field sampling activities. The study will be summarized in a report. Based on the results of previous personal air sampling and results of remedial investigations, we propose to provide level D site health and safety protection during field activities.

The results obtained from the above two tasks will be submitted in the form of a technical memorandum by the 15th of September, 1985.

Please feel free to contact me if you have any questions on any of the information included in this letter.

Sincerely yours,



S. K. Malhotra, Ph.D., P.E.

cc: Mr. James Whipple, Johns-Manville
SKM:sa

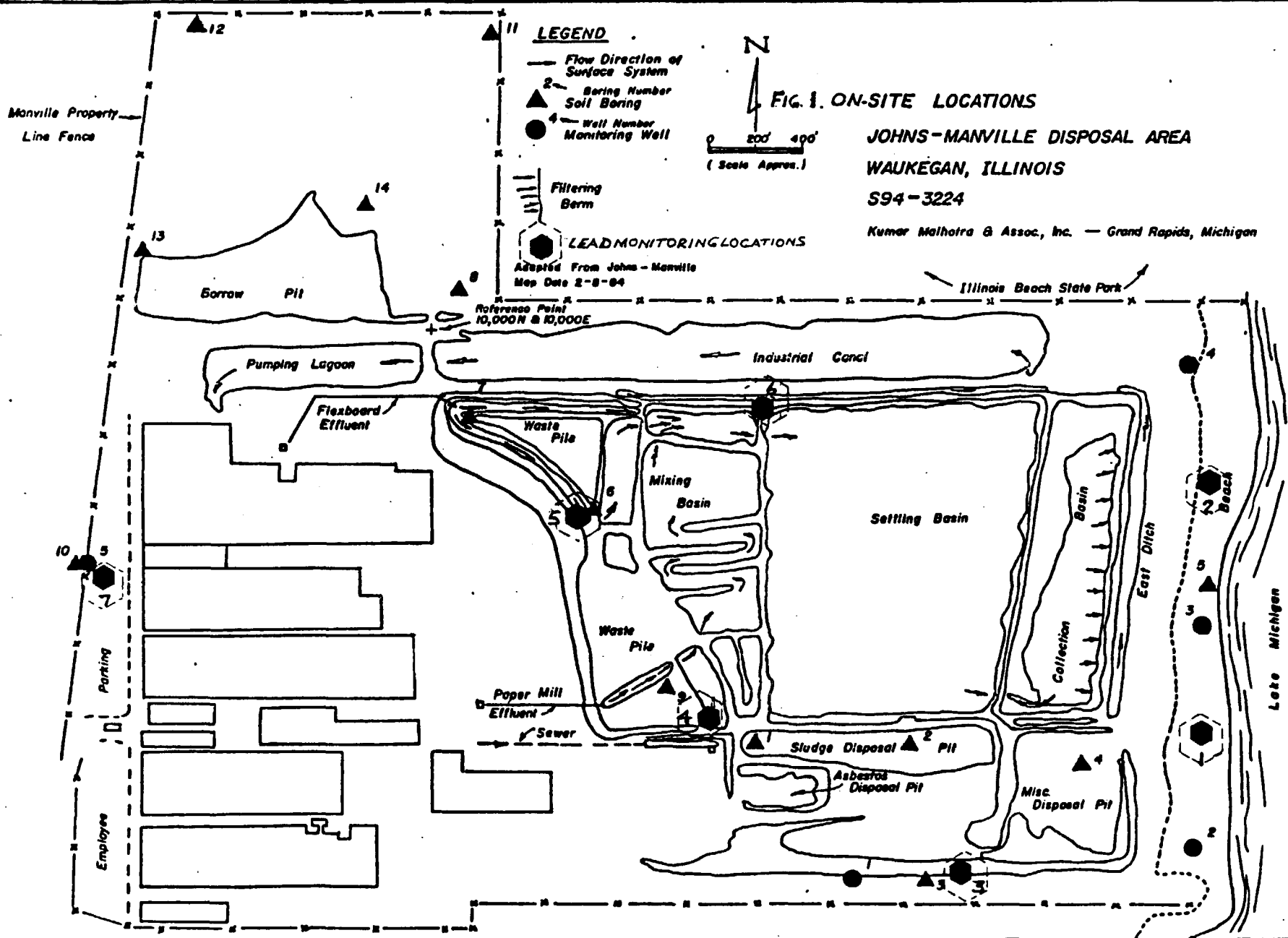
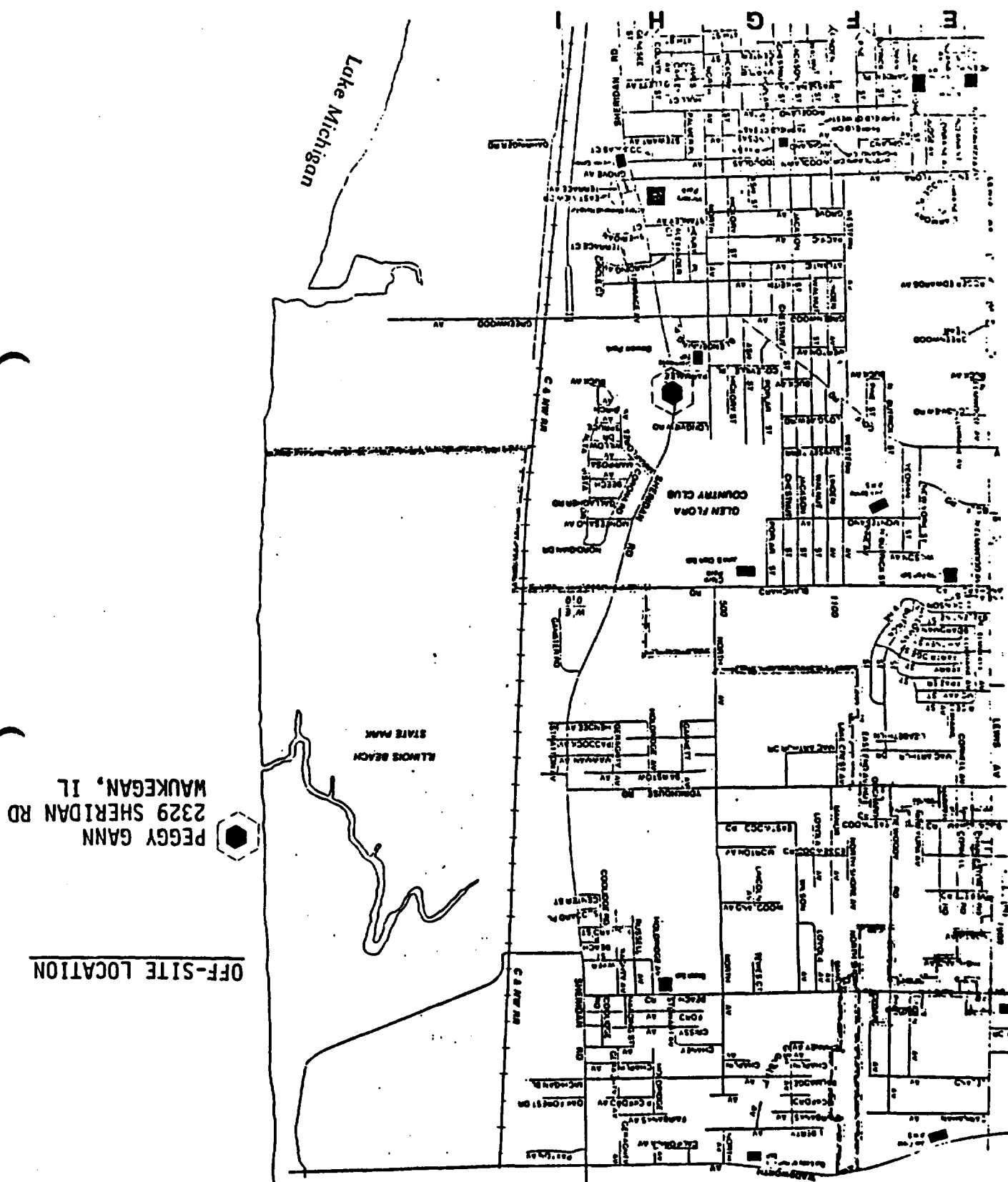


Figure 2. Location of Off-Site Sampler



PRC Engineering

prc

Planning Research Corporation

April 19, 1985

Ms. Nancy Deck
TES-2 Project Officer
Office of Waste Programs
Enforcement (WH 527)
U.S. EPA
401 M Street, S.W., Room 301
Washington, D.C. 20460

Dear Ms. Deck:

Enclosed are the work assignment monthly reports for March, submitted in accordance with the requirements set forth in EPA Contract No. 68-01-7037. These reports are separated by region, and reflect only those work assignments for which work plan approval was received from EPA by the end of the reporting month of March 1985. The status in brief of all other work assignments received as March 31 is as follows:

- 1) Work Assignments 56, 80, 86, 92, 95, 102, 106, 110, 137 have been submitted before March 1. However, work plan approval has still not been received by PRC.
- 2) Work Assignments 164, 165, 167, 171, 178, 181, 185, 186, 187, 191, 192, 197, 198, 204, 206, 207, 210, 220, 221, 222, 226, 227 and 231 were submitted during March for U.S. EPA contract officer approval and are yet to be approved to date.
- 3) Work Assignments 208-241 and 243-245 were received in March and work plans have been or are being developed for submittal and approval by U.S. EPA.

Visits to Regions 7 and 8 were conducted in March to discuss the TES 2 contract and procedures for use. Projected for April visits are Regions 4 and 6. These last two will complete the Regional visits and headquarters as well.

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PREPARED BY: [illegible] PREPARED

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Ms. Nancy Deck
April 19, 1985
Page Two

Sincerely,

PRC Environmental Management, Inc.

Thomas D. Brisbin

Thomas D. Brisbin
Deputy Program Manager

TDB/jy

Enclosures

cc: Marian Bernd, Contracting Officer (all monthly reports)
Barbara McAllister, Region 1 (24, 29, 47 68, 87, 101, 108, 114, 138,
48, 46, 105, 117, 78, 79, 107)
Cathy Moyik, Region 2 (27, 37, 74, 90, 142, 194)
Kathy Hodgkiss, Region 3 (123, 25, 26, 44, 54, 94, 129, 104, 84, 85,
62, 122, 103, 64, 63, 116, 115, 109, 91, 75, 73, 125)
Bert Cole, Region 4 (69, 76, 81, 82, 88, 89, 140, 141, 183, 195, 45,
51, 57, 58, 32, 31, 93)
✓ Seth Dibblee, Region 5 (96, 163, 55, 99, 112, 244, 28, 33, 126)
Connie Codner, Region 6 (120, 65, 66, 15, 121, 118, 119, 127, 16, 123)
Betty Berry, Region 7 (113, 100, 128, 38-43, 131, 30)
Roland Lech, Region 8 (230, 61, 77, 17, 52, 59, 60, 200-203)
Alexis Strauss, Region 9 (143, 49, 50, 199, 147, 150, 156, 176, 133)
James Everts, Region 10 (190, 134, 71, 72, 18, 19, 20, 36, 216)

ENCLOSURE

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U. S. DEPARTMENT OF AGRICULTURE

Planning Research Corporation

1. Mr. J. Edgar Hoover
 2. Director
 3. Federal Bureau of Investigation
 4. Washington, D. C.
 5. April 16, 1961
 6. Dear Mr. Hoover:
 7. I am writing you to inform you that
 8. I have been assigned to the
 9. position of
 10. Special Agent in Charge
 11. of the
 12. San Francisco Office.
 13. I will be reporting to you
 14. on April 20, 1961.
 15. I am sure that you will find me
 16. to be a person who is
 17. capable of handling the
 18. responsibilities of the
 19. position.
 20. I am, Sir, very respectfully,
 21. Yours truly,
 22. J. Edgar Hoover
 23. Director
 24. Federal Bureau of Investigation
 25. Washington, D. C.
 26. Enclosure
 27. Very truly yours,
 28. J. Edgar Hoover
 29. Director
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 230. Enclosure
 231. Very truly yours,
 232

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(Reporting Period: March 1 through March 31, 1985)

U.S. Environmental Protection Agency
Office of Waste Programs Enforcement
Washington, D.C. 20460

Region 5

DECLASSIFIED WORK PRODUCT DERIVED
FROM THE JAMES EARL RAY CASE

ENFORCEMENT
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WA#	SITE NAME	ST	REG #	<--- MARCH --->		<--- CUMULATIVE --->		<--- BUDGET --->		<--- % EXPENDED --->	
				TOTAL HOURS	TOTAL DOLLARS	HOURS	DOLLARS	HOURS	DOLLARS	HOURS	DOLLARS
2	Petersen Sand and Gravel	IL	5	0	0.00	212	7,592.50	158	7,971.00	134.2%	95.3%
3	Pagel's Pit	IL	5	2	196.30	164	5,986.74	208	10,891.00	78.8%	55.0%
4	Waste Mgmt. of Michigan	MI	5	17	579.34	47	1,669.80	158	8,481.00	29.7%	19.7%
5	South Macomb Disposal #9 & 9A	MI	5	4	153.41	20	867.72	158	8,927.00	12.7%	9.7%
6	Motor Wheel Disposal	MI	5	9	257.48	24	888.76	158	8,481.00	15.2%	10.5%
7	U.S. Ecology	IL	5	0	31.25	116	6,760.26	158	9,470.00	73.4%	71.4%
8	E.I. DuPont Montague	MI	5	1	241.17	137	6,407.19	165	9,223.00	83.0%	69.5%
9	Lenawee Disposal Service	MI	5	102	2,906.23	133	3,979.73	158	8,246.00	84.2%	48.3%
10	Thermo-Chem, Inc.	MI	5	0	353.29	207	6,565.46	208	10,853.00	131.0%	77.4%
11	Torch Lake	MI	5	5	174.71	15	587.35	158	8,481.00	7.2%	5.4%
12	Sanitary Landfill Co./IWD	OH	5	6	191.14	18	653.29	158	8,343.00	11.4%	7.8%
13	Menard Drum Disposal	WI	5	20	546.45	34	1,159.30	208	10,992.00	16.3%	10.5%
14	City of Stoughton Landfill	WI	5	29	813.34	45	1,446.18	208	10,884.00	21.6%	13.3%
28	Coshocton Landfill	OH	5	69	1,971.62	303	9,796.82	500	24,721.00	60.6%	39.6%
33	Reilly Tar and Chemical Corp.	MN	5	2	5,212.65	37	23,786.04	109	52,058.00	33.9%	45.7%
55	FMC	MN	5	54	4,265.62	79	6,148.45	176	17,184.00	44.9%	35.8%
96	Rose, Cemetary & Springfield	MI	5	114	5,202.10	140	6,034.74	170	7,242.00	82.4%	83.3%
99	Westinghouse Sites	IN	5	16	461.52	47	2,794.50	100	120,730.00	47.0%	2.3%
102	Paxton Landfill Corp	IL	5	0	0.00	22	779.09	0	0.00	ERR	ERR
112	Midco 1	IN	5	0	0.00	40	1,211.14	40	1,250.00	100.0%	96.9%
126	Seymour Recycling	IN	5	0	0.00	53	3,490.19	138	48,684.00	38.4%	7.2%
130	Seymour Recycling	IN	5	2	40.90	8	1,059.04	8	2,069.00	100.0%	51.2%
163	Gebhart Fertilizer	IL	5	21	544.24	33	871.33	80	4,394.00	41.3%	19.8%
191	Belvidere Landfill	IL	5	3	134.45	15	461.55	200	10,897.00	7.5%	4.2%
204	Laskin/Poplar	OH	5	4	109.03	19	1,041.53	158	81,061.00	12.0%	1.3%
208	Wayne Waste Oil	IN	5	30	796.38	30	796.38	200	7,259.00	20.0%	10.7%
226	Paxton Landfill	IL	5	11	395.68	11	395.68	50	61,159.00	5.5%	5.5%
233	Reilly Tar & Chemical	MN	5	3	81.77	3	81.77			6.0%	0.1%
TOTALS FOR REGION				524	25,660.06	2,012	103,312.55	4,340	567,414.00	46.4%	18.2%

*Rednick
Gaither
Bitter*

(14)

U.S. Ecology Responsible Party Search

Region	V
WA No.	7
Report No.	4
For	3/85
CERCLA	X
RCRA	

EPA Primary Contact: Rodney Gaither (312/886-4735)

TechLaw Project Manager: Jim Kerr (703/352-4516)

Project Status

On December 13, 1984 TechLaw received the results of the title search conducted on the site property. On December 18, 1984 TechLaw received an IEPA computer printout of waste generators who used the site. In late December, TechLaw also was informed by the legal department of U.S. Ecology, the site operator, that it declined to permit TechLaw to review any records it might possess regarding site transactions. Due to the delay in obtaining IEPA's printout and U.S. Ecology's response, EPA Region V agreed to delay the deliverable date for the Draft Report to December 21, 1984. After review of the available documentation, TechLaw submitted the Draft Report on that date.

Next Activities

TechLaw is awaiting EPA Region V's decision as to whether databases should be developed from information that could be extracted from various records in TechLaw's possession. In April, TechLaw will contact Mr. Gaither to discuss the report and determine EPA's schedule at this point for any follow-up research.

Schedule Problems

No schedule problems are foreseen for the deliverable dates associated with this Work Assignment.

ENVIRONMENTAL
CONFIDENTIAL
PREPARED WORK PRODUCT PREPARED
IN ANTICIPATION OF LITIGATION

IMPORTANT ANNOUNCEMENT FROM JOHNS-MANVILLE CORPORATION AND AFFILIATED COMPANIES:

If you wish to assert a Claim (except an AH Claim as defined below and certain others indicated below) against Johns-Manville Corporation or any affiliated company referred to below, you must file a proof of claim by October 31, 1984.

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF NEW YORK

In re
JOHNS-MANVILLE CORPORATION,
formerly known as JM MERGER
CORPORATION.
MANVILLE CORPORATION,
MANVILLE BUILDING MATERIALS
CORPORATION.
MANVILLE INTERNATIONAL CORPORATION,
MANVILLE EXPORT CORPORATION,
MANVILLE PRODUCTS CORPORATION,
JOHNS-MANVILLE INTERNATIONAL
CORPORATION.
JOHNS-MANVILLE SALES CORPORATION,
formerly known as JCCI, INC., CLUB
CAR, INC., L. GRANTHAM, HAMILTON
MANUFACTURING COMPANY, INCORPORATED,
JOHNS-MANVILLE ENERGY RESOURCES
CORPORATION, J-M FRESNO CORPORATION,
JOHNS-MANVILLE PERLITE CORPORATION,
JOHNS-MANVILLE PIPELINE ACCESSORIES
CORPORATION, JOHNS-MANVILLE STRUCTURAL
SYSTEMS CORPORATION, KEY TRANSPORTATION,
INCORPORATED, MOBILITE, INC., PLASTICS
CORPORATION OF AMERICA, SOUTHERN
JOHNS-MANVILLE PRODUCTS CORPORATION,
SOUTHERN REFINING CORPORATION,
STILLWATER CORPORATION, and ZESTON,
MANVILLE INTERNATIONAL CANADA, INC.,
MANVILLE CANADA INC.,
MANVILLE INVESTMENT CORPORATION,
formerly known as JOHNS-MANVILLE
INVESTMENT CORPORATION,
MANVILLE PROPERTIES CORPORATION,
ALLAN-DEANE CORPORATION,
formerly known as HMP CORPORATION.

In Proceedings For A Reor-
ganization Under Chapter 11.

Case No. 82 B 11656

Case No. 82 B 11657

Case No. 82 B 11658

Case No. 82 B 11660

Case No. 82 B 11661

Case No. 82 B 11662

Case No. 82 B 11665

Case No. 82 B 11666

Case No. 82 B 11667

Case No. 82 B 11668

Case No. 82 B 11669

Case No. 82 B 11670

Case No. 82 B 11671

KEN-CARYL RANCH CORPORATION,
formerly known as KEN-CARYL, INC.,
JOHNS-MANVILLE IDAHO, INC.,
MANVILLE SERVICE CORPORATION,
formerly known as JM CAPITAL
CORPORATION,
MANVILLE CANADA SERVICE INC.,
SUNBELT CONTRACTORS, INC.,

Case No. 82 B 11672

Case No. 82 B 11673

Case No. 82 B 11674

Case No. 82 B 11675

Case No. 82 B 11676

Debtors.

**NOTICE OF LAST DAY FOR
CERTAIN CLAIMANTS TO
FILE PROOFS OF CLAIMS**

TO: ALL THOSE ASSERTING CLAIMS AGAINST ANY OF THE ABOVE
CAPTIONED DEBTORS:

PLEASE TAKE NOTICE, that the United States Bankruptcy
Court for the Southern District of New York (the "Bankruptcy
Court") has entered an order dated July 16, 1984 requiring all
those entities which assert Claims (as defined in paragraph "1"
below) EXCEPT THOSE CLAIMS DESCRIBED IN SUBPARAGRAPHS 2(a), 2(b),
2(c), 2(d) AND 2(e) AND PARAGRAPH "3" BELOW, including
individuals, partnerships, corporations, estates, trusts, and
governmental units, which assert a Claim against one or more of
the above-captioned debtors (collectively, the "Debtors") arising
out of acts or omissions of one or more of the Debtors, to file a
proof of claim as hereinbelow described on or before October
1984 (the "Bar Date"), failing which such claimant shall not be
treated as a creditor with respect to such Claim for the purposes
of voting on, and distribution under, any plan of reorganization.

-2-

1. (a) As used herein: "Claim" means (i) a right to payment, whether or not such right is reduced to judgment, liquidated, unliquidated, fixed, contingent, matured, unmatured, disputed, undisputed, legal, equitable, secured or unsecured; or (ii) a right to an equitable remedy for breach of performance if such breach gives rise to a right to payment, whether or not such right to an equitable remedy is reduced to judgment, fixed, contingent, matured, unmatured, disputed, undisputed, secured or unsecured.

- (b) As used herein: "Property Damage Claims" means all Claims against, and debts, obligations or liabilities of, one or more of the Debtors (including, without limitation, all thereof in the nature of or sounding in tort, contract, warranty, or any other theory of law, equity or admiralty) for, relating to or arising by reason of, directly or indirectly, property damage (including, without limitation, diminution in the value thereof) or environmental damage or economic loss related thereto caused or allegedly caused, directly or indirectly, by asbestos or asbestos-containing products or any other activity or omission of products, goods, minerals or other materials and arising or allegedly arising, directly or indirectly, from acts or omissions of one or more of the Debtors (or another person, firm, corporation or other entity for or with which one or more of the Debtors is or may be liable), including, without limitation, all Claims, debts, obligations or liabilities for compensatory damages (including, without

limitation, proximate, consequential, general and special damages), punitive damages, reimbursement, indemnity, warranty, contribution and subrogation;

- (c) As used herein: "AH Claims" means all Claims against, and debts, obligations or liabilities of, one or more of the Debtors or J. M. Asbestos (f/k/a Johns-Manville Canada, Inc.) or 126692 Canada, Inc. (f/k/a Johns-Manville Amiante Canada, Inc.) (the "Canadian Companies") (including, without limitation, all thereof in the nature of or sounding in tort, contract, warranty or any other theory of law, equity or admiralty) for, relating to or arising by reason of, directly or indirectly, physical, emotional or other personal injuries or damages (whether or not diagnosable prior to the confirmation date of a plan of reorganization) caused or allegedly caused, directly or indirectly, by asbestos or asbestos-containing products and arising or allegedly arising, directly or indirectly, from acts or omissions of one or more of the Debtors or either of the Canadian Companies (or another person, firm, corporation or other entity for or with which one or more of the Debtors or either of the Canadian Companies is or may be liable), including, without limitation, all Claims, debts, obligations or liabilities for compensatory damages (including, without limitation, loss of consortium, proximate, consequential, general and special damages), punitive damages, reimbursement, indemnity, warranty, contribution and subrogation.

"AH Claims" shall not include claims for property damage (school asbestos cases, for example)

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Midwest / Chicago

NEWS-SUN

Waukegan, IL

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JUNE -20-87

Manville Corp. to study effects of waste site

By RALPH ZABORIK
Staff Writer

The Manville Corp. has agreed to conduct a study on the effect of its Waukegan asbestos disposal site on the environment, the U.S. Environmental Protection Agency announced Tuesday.

The agreement breaks an impasse between the federal government and Manville over the dump site. The site was designated potentially hazardous two years ago, but no action has been taken since then. The study is expected to take 11 months to complete.

Thousands of tons of waste asbestos are buried at the Manville site, located by the east end of Greenwood Avenue, next to the Waukegan, Ill., Manville plant and about 100 feet from

Lake Michigan. The site is on the federal government's "Superfund" list of the most potentially hazardous waste disposal sites in the United States and is ranked 11th among the 38 highest sites on the "Superfund" list, a ranking strongly disputed by Manville.

Air samplings were last taken around the site two years ago by EPA investigation. At that time, asbestos was found in the air, but Manville was questioned, the method of sampling. No air sampling has been done since 1982.

Manville, the federal and the federal government have been negotiating for several months on the site, and the agreement for a study is a result of the negotiations. Page 44, Col. 1

Manville

Continued from Page A 113
negotiations. Manville has maintained it has followed all government regulations in disposing of asbestos, that its Waukegan dump site poses no danger to the environment and should not be on the Superfund priority cleanup list.

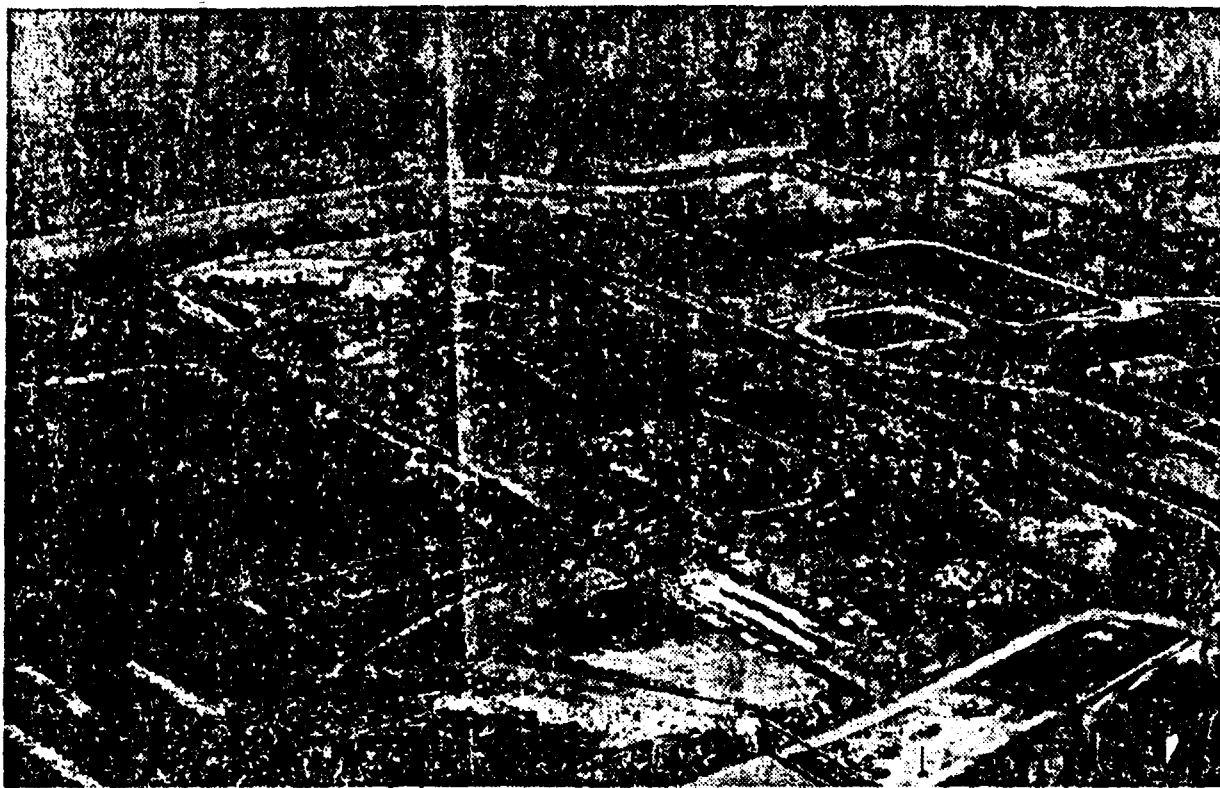
If Manville had refused to conduct the study, the EPA would have conducted its own investigation, an EPA spokesman said.

The agreement, in the form of an administrative consent order from the federal agency, calls for the Johns-Manville Sales Corp. to determine the waste disposal site's impact on the environment "which may have resulted from past on-site disposal practices," said Valdas Adamkus, Region 5 EPA administrator. "John-Manville has been disposing asbestos and other hazardous wastes (at the site) since 1923."

In issuing the order, Adamkus said Johns-Manville will also propose to the agency a cleanup plan "to rectify any environmental problems resulting from its disposal practices that may be identified by the corporation's site investigation."

Additionally, the corporation has agreed to pay \$43,735 as reimbursement for investigative costs "incurred by the EPA on this matter since Aug. 26, 1982," he said. The money will go to the "Superfund" — formally known as the federal Hazardous Substance Response Trust Fund.

Adamkus noted that the Aug. 26 date is the same date the Manville Corp. filed for reorganization in U.S. Bankruptcy Court.



Thousands of tons of waste asbestos are buried at Manville plant and about 100 feet from Lake the Manville dump, located at the east end of Michigan. Greenwood Avenue, next to the Waukegan Johns-

File Photo

The consent order is subject to Bankruptcy Court approval and "any modifications that might become necessary because of a 30-day public comment period," said Adamkus.

The administrative court order is available for public review by contacting Vanessa Musgrave, Office of Public Affairs, U.S. Environmental Protection Agency Region 5, 230 S. Dearborn St., Chicago, 60664, or by calling 886-6128 in Chicago.

The EPA has conducted some investigations of the Johns-

Manville dump site. "We know what's there," said Robert Hartian, a spokesman for the Chicago office of the federal EPA. A comprehensive, up-to-date investigation is needed, he said.

The EPA itself could make the investigation, "but under 'Superfund,' it's more desirable to have the parties responsible undertake this aspect," he said. "It's more desirable for them to qualify what has happened, to determine where asbestos has escaped, whether it has migrated through subsoils, to figure out the solution, to come up with the preferred solution. They'll lay it out and present it to us, then it will

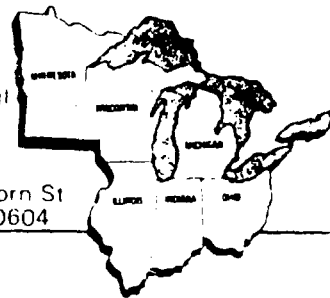
be determined who should do the cleanup."

The study is expected to take at least 11 months, said Mary Tomenko, a spokeswoman for Manville in Littleton, Colo., the corporation's headquarters. It won't begin for at least 30 days — the period of public comment. The order allows six months for the study itself — air and water samplings, soil borings and the like — and presentation of an initial report.

The federal EPA will have a month to respond to the report and Manville will have three more months after that to make its final recommendations about the disposal site.

EPA Environmental NEWS RELEASE

United States
Environmental
Protection
Agency
Region V
230 S. Dearborn St.
Chicago, IL 60604



Media Contact: Robert M. Hartian
(312) 886-6588

For Immediate Release: July 16, 1984

NO. 84-168

U.S. EPA EXTENDS PUBLIC COMMENT PERIOD ON JOHNS-MANVILLE PROPOSED WAUKEGAN AGREEMENT

U.S. Environmental Protection Agency (U.S. EPA) Region V Administrator Valdas V. Adamkus today announced he is extending the 30-day public comment period on the U.S. EPA/Johns-Manville Sales Corp. administrative consent order to July 31, 1984. The extension will provide interested citizens additional time to review and make comments on the proposed order.

The agreement, which remains subject to any substantive public comments and U.S. Bankruptcy Court approval, was announced on June 19, 1984. It provides for the company to conduct an investigation at its Waukegan, IL, facility to determine the extent and impact of environmental contamination that may have resulted from past on-site disposal practices. The company will also propose to U.S. EPA a site cleanup plan. Johns-Manville has been disposing of asbestos wastes and other hazardous wastes at its Waukegan facility since 1923.

- MORE -

The administrative consent order is available for public review at the Waukegan Public Library, 128 County St., and at the U.S. EPA Region V Office of Public Affairs, 230 South Dearborn St., Chicago, IL 60604; (312) 886-6128. Comments should be addressed to the attention of Vanessa Musgrave, at the above address.

#

NOTE TO EDITORS AND BROADCASTERS: Initial announcement made in U.S. EPA Region V press release NO. 84-151, dated June 19, 1984.

EPA Environmental NEWS RELEASE

United States
Environmental
Protection
Agency
Region V
230 S. Dearborn St.
Chicago, IL 60604



Media Contact: Robert Hartian
(312) 886-6588

For Immediate Release: June 19, 1984
No. 84-151

U.S. EPA AND JOHNS-MANVILLE REACH ACCORD ON INVESTIGATION OF WAUKEGAN FACILITY

The U.S. Environmental Protection Agency (U.S. EPA) Region V announced today that the Agency and Johns-Manville Sales Corp. have entered into an administrative consent order under which the corporation will conduct an investigation at its Waukegan, Ill., facility to determine the extent and impact of environmental contamination which may have resulted from past on-site disposal practices. Johns-Manville has been disposing of asbestos wastes and other hazardous waste on its Waukegan facility since 1923.

In issuing the order today for the U.S. EPA, Regional Administrator Valdas V. Adamkus said that Johns-Manville will also propose to the Agency a cleanup plan to rectify any environmental problems resulting from its disposal practices that may be identified by the corporation's site investigation. Additionally, the corporation has agreed to pay the Federal Government \$43,735 as reimbursement for investigative costs incurred by the U.S. EPA on this matter since August 26, 1982. The reimbursement is to be made to the Federal Government's Hazardous Substance Response Trust Fund.

Adamkus noted that the August 26th date is the same date that the corporation filed for reorganization in the United States Bankruptcy Court. And, that the consent order is subject to Bankruptcy Court approval and to any modifications that might become necessary as a result of comments received during a 30-day public comment period.

-2-

The administrative consent order is available for public review by contacting Vanessa Musgrave, Office of Public Affairs, U.S. EPA Region V, 230 S. Dearborn St., Chicago, IL 60604; (312) 886-6128.

#

Manville Service Corporation
Ken-Caryl Ranch
Denver, Colorado 80217
303 978-2000

old
Manville

March 23, 1984

United States Environmental Protection Agency
Region 5
230 South Dearborn Street
Chicago, Illinois 60604

Attention: Norman Niedergang, P.E.

Reference: Supplemental General Conditions and Specifications
Geotechnical and Hydrological Investigation
Waste Disposal Site Study
Waukegan Illinois Plant
Project S94-3224

Dear Mr. Niedergang:

This letter is to advise you of the additions, deletions, and/or revisions made to the above referenced document as compared to the submittal dated February 14, 1984. Since this document will be used in the bid package, we are submitting the above referenced document as a unit for your review.

The changes are as follows:

Supplemental General Conditions

Asterik footnote at bottom of page SGC-1.

Specifications

Paragraph	Remarks
1.2.1	Complete revision - added 1.2.1.1 thru 1.2.1.5. Added second statement under 1.2.1.5.
1.2.5	Added statement.
1.3, 1.4	Complete new sub-paragraph.
3.2, 3.4	Revised statement.
4.1.1	Numbered existing statement.
4.2.5	Completed sub-paragraph.
6.0	Revised last sentence.

Specifications (continued)

8.1 ✓	Revised site survey control requirements.
9.1.3 ✓	Completely revised sub-paragraph.
9.1.4 ✓	Added sub-paragraph.
9.1.5 thru 9.1.7	Renumbered.
9.1.8 ✓	Added sub-paragraph.
9.2.4 ✓	Added statement.
9.4.1, 9.4.2, 9.4.3 ✓	Revised statements.
9.4.4 ✓	Completely revised sub-paragraph.
9.4.5 ✓	Revised quantity and statement.
10.2.1, 10.2.2 ✓	Added sub-paragraphs.
10.4.3 ✓	Revised statement.
10.4.4, 10.6.1 ✓	Completely revised sub-paragraph.
10.6.2 ✓	Added sub-paragraph.
10.6.6 ✓	Deleted sub-paragraph.
11.2.3 ✓	Added statement.
11.4.2 ✓	Added sub-paragraph.
11.4.3, 11.4.4	Renumbered.

Drawings

Dwg. No.	Remarks
36121-4	Relocated disposal on-site ground water monitoring well south of sludge disposal pit.
36122-4	Relocated three east-west soil boring sites in disposal pit areas. <i>no</i>
	Relocated north soil boring site on J-M property.

Very truly yours,

James H. Whipple

James H. Whipple
Sr. Staff Engineer

March 23, 1984
Project S94-3224
Page 3

Distribution:

C. Bowers	1-01	w/o enclosure
D. Burford	1-06	w/enclosure
J. Crawford	2-09	w/enclosure
C. Lown	SHW Chicago	w/enclosure
S. Moser	2-16	w/enclosure
L. Mutaw	Waukegan	w/o enclosure
C. Nerheim	3-27	w/o enclosure
S. Ng	3-25	w/o enclosure
J. Scott	Waukegan	w/enclosure
T. Van der Veer	3-26	w/o enclosure

Central File S94-3224

Enclosure:

Suppl. Gen. Cond's and Spec's dated March 23, 1984 w/attachments,
Tables 1 & 2, Proposed Groundwater Monitoring Well Details
Drawings No. 36121-4 & 36122-4

SUPPLEMENTAL GENERAL CONDITIONS
AND
SPECIFICATIONS
FOR
GEOTECHNICAL AND HYDROLOGICAL INVESTIGATION
OF THE
WASTE DISPOSAL SITE STUDY
AT
JOHNS-MANVILLE SALES CORPORATION
WAUKEGAN, ILLINOIS PLANT
PROJECT: S94-3224

Prepared by: Manville Service Corporation
P. O. Box 5108
Denver, CO 80217

March 23, 1984
Submitted to Illinois EPA and USEPA

0440W

SUPPLEMENTAL GENERAL CONDITIONS1.0 General

- 1.1 The work to be completed under this contract includes the obtaining of all necessary permits, (see SGC paragraph 11.0, Codes and Ordinances) furnishing all tools, equipment, labor, and materials (unless specifically omitted herein) necessary to complete the geotechnical and hydrological investigation of the waste disposal site study at our Waukegan, Illinois plant, as specifically outlined under "Scope of Work" below.
- 1.2 Without prejudice to the foregoing, the quality of consultant services shall be as stipulated in these specifications and all work done by the Consultant shall be completed to the satisfaction of the Owner. The Owner shall require that all field and laboratory work will be accomplished per acceptable industry testing standards.
- 1.3 The waste disposal site for this investigation has been in use since 1922. The topography varies and it is assumed that the area was originally a marsh similar to the state park immediately to the north of this property. The site presently consists of solid waste disposal areas and a process closed water system. The closed water system consists of three (3) pump effluent points discharging into a series of settling basins with the water returning to the plant via the Industrial Canal along the north side. The site is bounded by Lake Michigan on the east, Illinois Beach State Park on the north, an old city dump site on the west, and a fossil fuel electrical power generating station on the south.

2.0 Scope of Work

- 2.1 See specifications, paragraph 1.0.

3.0 Work Not Included

- 3.1 See specifications, paragraph 2.0.

4.0 Work Schedule

- 4.1 Upon award of Contract, Consultant shall proceed immediately with ordering the required materials. Provide a safety, technical, and site preparation program for approval by the Owner and governmental agencies prior to starting field work.
- 4.2 Start Field Work - Consultant shall start actual field activities on *(May 1, 1984). Consultant may move onto site and set up field office prior to this date.
- 4.3 Completion of Work - The Owner requires that the work included under this contract shall be completed by *(October 31, 1984).

*Dates to be finalized by mutual agreement with Illinois EPA and USEPA

4.4 Consultant will be required to prepare immediately after contract award a detailed schedule incorporating dates shown above.

4.5 Consultant agrees in acceptance of schedule that he can properly man project within terms and conditions of contract.

5.0 Owner Supplied Material

Not Applicable.

6.0 Special Inspections and Tests

Not Applicable.

7.0 Responsibility for Loss of Materials

The Owner will not be responsible for the Consultant's loss of tools, materials, etc. The Consultant must safeguard his own property.

8.0 Approved Applicators

Not Applicable.

9.0 Safety, Fire Protection

The Consultant shall adhere strictly to all local, state, OSHA and Plant rules and regulations for industrial construction.

The Owner and/or Owner's Representative are not responsible for the Consultant's compliance with any applicable safety requirements, but is empowered to stop any activities of the Consultant (or its employees) that he considers dangerous.

10.0 Cleanup

The Consultant shall maintain the work area in a clean and satisfactory manner. Do not allow debris to accumulate. A clean-up shall be made once a week or as directed by the Owner and/or Owner's Representative. Construction debris must be removed from site. No dumping or burning will be allowed on Owner's property.

11.0 Codes and Ordinances

All construction shall comply strictly with all local, state and Federal codes and/or ordinances where such is applicable. It will be the Consultant's duty and responsibility to obtain the required approvals and all necessary permits, except that the Owner will obtain any EPA permits required.

12.0 Change Orders

- 12.1 Consultant shall provide the Owner with a typewritten fee schedule for those professional and technical services to be used in the completion of this contract. Any additions and/or deletions to this contract's scope of work shall be accomplished by issuance of a change order based upon this fee schedule.
- 12.2 Quoted prices, submitted by the Consultant on all change orders over \$1,000, including firm price changes, must be completely documented. This would include complete detailed estimates, with man-hours, material quantities, etc. The formula and percentages of Article VI of the contract shall be used for all change orders.
- 12.3 The above applies to all sub-contractors' prices to the Consultant unless changed otherwise by the Owner.
- 12.4 No requests for contract extras will be honored unless Owner's representative is notified prior to start of any work considered to be extra by Consultant.

13.0 Site Visits

The Consultant has visited the site with the Owner's representative and acquainted himself with existing conditions. The Consultant shall, at no time after the visit, assert that there is any misunderstanding in regard to the nature or extent of the work or working conditions.

14.0 Facilities and Services by Owner

- 14.1 Exterior electrical and water services are not available in the immediate disposal site. Consultant shall make arrangements for portable sources if services are required.
- 14.2 Uncovered storage space is available.
- 14.3 The Owner will not unload any of the Consultant's material or equipment.
- 14.4 If Consultant employee parking should be required, it will be in areas designated by the Owner. The Consultant shall be responsible for the maintenance and security of this area as directed by the Owner if such maintenance and security is not presently provided by the Owner.
- 14.5 Consultant access to the disposal site shall be through a gate designated by the Owner. The Consultant shall be responsible also for the maintenance and security of this access point as directed by the Owner. This access point will be for Consultant and sub-contractors only.

14.6 The Consultant shall provide toilet facilities for his personnel. The Owner's toilet facilities and lunchrooms are not to be used by Consultant's personnel.

15.0 Other Contracts

The Owner may have separate contracts in force at the same time and in the same areas. It will be important that this Consultant schedule his work and cooperate with Contractors already on site.

16.0 Owner's Operations

16.1 The Consultant shall not interfere in any way with the Owner's present operations. The Consultant shall not remove any existing construction without prior approval from the Owner. The Owner's operations must be maintained at all times.

16.2 This plant is in operation twenty-four (24) hours per day, seven (7) days per week. The Consultant shall not make any connections to existing services that will interfere with plant operation. Any such connections that are required in accordance with the specifications and drawings shall be authorized by and accomplished under the supervision of the Owner's Representative.

17.0 Standards

References made to trade, technical, governmental or other codes, standards or specifications shall be interpreted as minimums and not maximums.

18.0 Welding

Not applicable.

19.0 Shop Drawings

Not applicable.

20.0 Operating Manuals

Not Applicable.

21.0 Invoicing

Consultant will be expected to break down his lump sum price and submit monthly billings on special form attached to these specifications. The Owner's Representative must review and approve the breakdown of funds on the invoice prior to the first submission of invoice.

22.0 Field Measurements

Consultant shall be responsible for the taking of all field measurements and the checking for any interferences before starting field work. Consultant shall notify Owner's Representative of any changes required to clear existing facilities.

23.0 Attachments to Steel Roof

Not Applicable.

24.0 Job Accidents

24.1 Consultant has the responsibility of notifying the Owner's Representative of all accidents to the Consultant's or Sub-Contractor's personnel.

24.2 In the case of a lost-time accident, the Owner's Representative must be notified immediately. In all cases, a written report must be made within two days of an accident.

25.0 No Smoking Policy

25.1 The Consultant is advised that smoking is prohibited in all areas of this plant site.

25.2 This regulation applies not only to Consultant's personnel working on site, but to his vendors, truck drivers, etc., who visit the site.

25.3 If someone is smoking, they will be asked to extinguish their smoking material. Non-compliance with this request will result in the individual or Consultant being asked to leave the premises.

25.4 There will be no exceptions made to this regulation.

26.0 Asbestos Containing Materials

The consultant shall comply with all Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), and all state and local regulations for the safe handling of asbestos-containing materials. This includes all procedures and, specifically, procedures for the tearout or removal of existing asbestos-containing materials. Asbestos-containing wastes generated from removal of old asbestos-containing materials shall be handled and disposed of according to OSHA, EPA, and state and local regulations.

27.0 Drawings

<u>Dwg. No.</u>	<u>Title</u>	<u>Remarks</u>
36121-4	Proposed Groundwater Monitoring Well Locations	
36122-4	Proposed Soil Sampling Locations	
42000-1	Topographic Map Waste Disposal Site Study	The Sidwell Co. drawing Job No. T2-020

Reference Drawings

B36014-4	Proposed Constr. Areas, Waste Disposal Site Study	General Plant Layout, Clearing & Grading Phase
36123-4	Proposed Warning Sign Location	Work by Others
A41827-1	Proposed Constr. Areas, Waste Disposal Site Study	Topographic Map, Clearing & Grading Phase

GEOTECHNICAL AND HYDROLOGICAL INVESTIGATION
SPECIFICATIONS

Waukegan - Waste Disposal Site Study
Project S94-3224

1.0 Scope of Work

1.1 The field work area for this investigation shall be confined to the Johns-Manville Sales Corporation, Waukegan, Illinois plant property as shown on contract drawings, see Supplemental General Conditions, paragraph 27.0, page SGC - 6.

1.2 The geotechnical and hydrological investigation shall consist of the following phases:

1.2.1 Work Plan Preparation.

This phase should include the following items:

1.2.1.1 Site Health and Safety Plan.

1.2.1.2 Quality Assurance Project Plan.

1.2.1.3 Field Protocols.

1.2.1.4 Subcontractor Procurement.

1.2.1.5 Site Safety and Decontamination Facilities.

The initial site visit portion normally associated with this phase will be completed during bidding phase prior to issuance of contract.

See paragraphs 1.3 and 1.4 for submittal requirements.

1.2.2 Soil Sampling and Analysis.

1.2.3 Groundwater Monitoring Well Installation.

1.2.4 Groundwater Quality Sampling and Analysis.

1.2.5 Preparation and Submittal of Technical Report.

The report shall include the technical memorandums for the soil and water sampling and analysis.

1.3 Within thirty (30) days from award of contract and prior to the initiation of any site work, the Consultant shall submit to the Owner, Illinois EPA, and USEPA for approval of the following documents and/or plans:

1.3.1 Site Health and Safety Plan.

1.3.2 Quality Assurance Project Plan.

1.3.3 Field Protocols.

1.4 Prior to the initiation of any site work, the Consultant shall submit to the Owner only for approval of the following documents and/or plans:

1.4.1 Subcontractor Procurement.

1.4.2 Site Safety and Decontamination Facilities.

2.0 Work Not Included

2.1 Site Data

The collection and cataloging of existing site data to develop a bibliography of the existing disposal site. The necessary information for this function will be provided by the Owner.

2.2 Topographic Survey

A recent topographic map will be provided by the Owner. See contract drawing list.

2.3 Warning Sign Installation

The installation of warning signs will be completed under separate contract issued by the Johns-Manville Waukegan Plant, see Drawing No. 36123-4.

3.0 Site Health and Safety Plan

Prior to the initiation of any on-site drilling, several items shall be provided and/or procedures established by the Consultant. The work under this section shall consist of the following:

3.1 Documentation of Field Data and Laboratory Work.

Standard forms shall be required for boring logs, chain of custody records, field and laboratory notebooks, sample labels, etc.

3.2 Site Safety

Site safety program shall be developed in accordance with approved operating procedures. These procedures shall be distributed to all field personnel including subcontractors. Standard safety practices for drilling shall be adhered to including periodic checking of equipment.

3.3 Emergency Procedures

A person shall be required on-site at all times that is trained in emergency first aid. Arrangements shall be made in advance for emergency medical treatment, posting telephone numbers for emergency and ambulance services, and name, directions, telephone number of nearest medical facilities.

3.4 Personnel Protective Equipment

See Supplemental General Conditions, paragraph 26.0, page SGC-5, and Site Safety Decontamination Facilities, paragraph 7.0, page 5 of the specifications.

3.5 Weather

Under extreme weather conditions, an assessment will be made for the necessity of additional protection and/or monitoring of personnel (e.g., for heat stress).

3.6 A decontamination program will be established for personnel leaving the disposal site.

3.7 The Site Health and Safety Plan shall be consistent with *and the* work performed and comply with the following:

3.7.1 USEPA - Occupational Health and Safety Manual

3.7.2 USEPA Order 1440.1 - Respiratory Protection

3.7.3 USEPA Order 1440.3 - Health and Safety Requirements for Employees Engaged in Field Activities

- 3.7.4 USEPA - Interim Standard Operating Safety Guides
- 3.7.5 Illinois Occupational Safety and Health Act
- 3.7.6 Actual disposal site conditions

4.0 Quality Assurance Project Plan

- 4.1 The Consultant shall develop a quality assurance project plan for the sampling, analysis, and data handling of the various soil and water samples. The plan shall be consistent with the requirements of:
 - 4.1.1 USEPA QAMS-005/80 Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans
- 4.2 The Consultant shall use acceptable Q.A./Q.C. programs. Specific items of concern that shall be satisfactorily complied with as follows:
 - 4.2.1 Equipment shall be maintained and calibrated at regular intervals.
 - 4.2.2 Procedures for sampling shall follow ASTM methods and/or adhere to EPA guidelines.
 - 4.2.3 Standard field notebooks shall be used during sampling to record all information and observations.
 - 4.2.4 Work shall be carried out only by qualified personnel.
 - 4.2.5 Sample custody shall be documented by the Consultant's procedures while in-house, and by EPA guidelines outlined "Test Methods for Evaluating Solids Waste (EPA-SW-846, 1980)" as necessary. In addition overall sample custody shall comply with paragraph 4.1.1 above.

5.0 Field Protocols

The Consultant shall develop field protocols for various situations that may occur during the field phase. Situations to plan for but not limited to:

- 5.1 Decontamination of equipment, and sampling equipment between sampling.
- 5.2 Disposal procedures of any contaminated soils, ground waters, etc.
- 5.3 Hole abandonment procedures.

6.0 Sub-Contractors Procurement

The Consultant shall submit the required documents to their prospective sub-contractors for bidding various work to be sub-contracted. Consultant shall submit the name/s of sub-contractor/s and scope of work to be performed for approval by the Owner.

7.0 Site Safety Decontamination Facilities

7.1 The Consultant shall provide site safety and decontamination facilities. A combination decontamination and office trailer shall be supplied for site use by all field personnel. In addition, personal air samplers shall be worn by all field personnel to monitor airborne asbestos. Filters will be analyzed for asbestos fibers.

7.2 It is assumed that the site health and safety assessment recommends Level C protection for all on-site activities. The Consultant shall use disposable personal protective clothing and decontamination materials.

8.0 Site Survey

8.1 The Consultant shall retain a registered Illinois land surveyor to provide temporary on-site bench marks from which drill crews shall establish locations and surface elevations of each boring. The survey tolerance shall be as follows:

- | | | |
|-------|--------------------------------|-------------------------|
| 8.1.1 | All boring locations: | Horiz. - + 1 ft. |
| 8.1.2 | Ground water monitoring wells, | Vert. Elev - + 0.01 ft. |
| 8.1.3 | Soil borings, | Vert. Elev. - + 0.1 ft |

8.2 The actual location of the borings per drawings to be within one (1) foot + in any horizontal direction due to ongoing activities at the site and/or nature of the waste fill material.

9.0 Soil Sampling and Analysis

9.1 The Consultant shall determine whether the surface, near surface, and subsurface soils are contaminated with hazardous substances. This shall include samples from both fill materials and natural underlying soils where practical.

9.1.1 Disposal on-site and perimeter (disposal off-site) soil samples shall be analyzed for the presence of substances identified in paragraph 9.2. Representative surface and near-surface soil samples could be obtained with a solid-stem hand auger.

- 9.1.2 Surface and near-surface samples shall be taken at 0.0 to 0.5 foot and 1.0 to 1.5 feet typically at four (4) places at each location. The samples will be composites from the locations at the two depth intervals. The proposed on-site and perimeter sampling locations are shown on contract drawings. Sampling equipment shall be decontaminated between samples.
- 9.1.3 From the disposal on-site soil borings, representative subsurface samples shall be obtained at two and one-half (2.5) foot intervals in the waste fill material. *In the soil, 1 foot 6, and* In order to minimize the possibility of contaminating the underlying natural soils, the soil borings through the waste fill material shall ~~penetrate approximately one (1) foot into~~ the underlying natural soils. This penetration shall be to obtain one (1) sample only. Upon field determination of the total depth of waste fill material at each boring hole, the Consultant shall review with the Owner as to what percentage of the fill samples will be analyzed. The remainder shall be properly stored for future analysis if required.
- 9.1.4 Continuous sampling from the perimeter (disposal off-site) soil boring holes shall be obtained to a depth of thirty (30) feet *disposal off-site.*
- 9.1.5 The soil borings shall be made with a standard 6 1/4" O.D. hollow stem auger. Sample shall be obtained using split spoon sampling or thin wall tubes, as field conditions permit, following ASTM procedures.
- 9.1.6 All sampling and testing shall conform to guidelines in the User's Guide to the US EPA Contract Laboratory Program (CLP) prepared by the Sample Management Office of CLP and published in August 1982.
- 9.1.7 Cuttings can be disposed of on site.
- 9.1.8 All samples and data obtained should be stored for twelve (12) months after completion of laboratory work. The Owner shall be notified prior to disposing of the samples.

9.2 Soil samples would be analyzed for:

9.2.1 Asbestos fibers

9.2.2 Engineering properties (sieve, specific gravity, moisture content, Atterberg limits, permeability).

9.2.3 Inorganic Analysis Data Sheet (Table 1)

9.2.4 Organic Analysis Data Sheet (Table 2)

Non-priority pollutant hazardous substances list compounds may be deleted except for Xylene.

9.2.5 Thiram

9.3 A technical memorandum describing the soil sampling and analysis program shall be prepared. The technical memorandum shall include a description of the sampling procedure, a summary of the laboratory test results, and copies of the laboratory data sheets. Five (5) copies of the technical memorandum shall be submitted to the Owner and Illinois EPA, and USEPA.

9.4 For the purpose of completing a bid estimate, the following assumptions can be used for estimated quantities:

9.4.1 Ten (10) surface soil locations at the boring sites with composite samples from four places at each location.

9.4.2 Forty (40) surface and near-surface soil samples listed in paragraph 9.4.1 above shall be analyzed for asbestos fibers, organic and inorganic packages, Thiram, and Xylene.

9.4.3 Eighty-four (84) subsurface soil samples from the waste fill material shall be taken, (30' depth \pm 2.5' intervals) x 7 holes, (6 soil boring and 1 well).

9.4.4 Twenty-four (24) subsurface soil samples shall be analyzed for asbestos fibers, organic and inorganic packages, Thiram and Xylene. The samples shall consist of twelve (12) waste fill material samples (2 samples per 7 disposal on-site holes) and ten (10) natural soil samples (1 sample per each boring hole).

9.4.5 One hundred and twenty (120) lineal feet of continuous soil sampling, 30' depth x 4 perimeter (disposal off-site) holes.

9.4.6 Site sampling team consists of one engineering geologist/geotechnical engineer/hydrogeologist, and two technicians.

10.0 Groundwater Monitoring Well Installation

10.1 The Consultant shall install groundwater monitoring wells at locations shown on the contract drawings.

10.2 These wells shall be used to determine whether the near surface groundwater is contaminated with hazardous substances. The wells shall be drilled through the disposal fill and into the top of the natural ground layer.

10.2.1 The disposal on-site well/s that are drilled through the waste fill material shall be drilled thirty (30) feet into the underlying natural soils. ? NO

10.2.2 The perimeter (disposal off-site) wells shall be *screened so* drilled thirty (30) feet into the natural soils. *as to monitor the uppermost portion of the shallow aquifer.*

10.3 Screen positions shall be determined in the field based on the subsurface conditions.

10.4 The monitoring wells shall be constructed in compliance with Federal and State regulations. Well drilling and installation shall be logged and inspected by a qualified hydrogeologist/geotechnical engineer/engineering geologist.

General requirements are:

10.4.1 All drilling equipment, pipe, and materials shall be decontaminated before drilling.

10.4.2 Eight (8) inch minimum diameter boreholes shall be drilled with a hollow stem auger or cable tool drill rig.

10.4.3 From the disposal on-site groundwater monitoring well/s, representative subsurface soil samples shall be obtained at two and one-half (2.5) feet intervals in the waste fill material using a standard split-spoon sampler (ASTM D 1586) until natural ground is reached.

10.4.4 A continuous sample of the natural ground. *for geological logging purposes* No soil samples will be taken during the drilling operations *shall be critical* for the perimeter (disposal off-site) ground water monitoring wells.

- 10.4.5 The monitoring wells shall be constructed as per details attached to these specifications.
- 10.4.6 Wells shall be developed with air, bailing, or surging techniques after installation.
- 10.4.7 All drilling equipment, pipe, and materials shall be decontaminated before proceeding to the next hole.
- 10.4.8 Top of casing elevations shall be obtained for all wells to within 0.01 foot.
- 10.4.9 Field hydraulic conductivity tests ~~would be~~ *shall* conducted on some wells if aquifer characteristics permit.
- 10.4.10 All samples (groundwater and soil) and data obtained shall be stored for twelve (12) months after completion of laboratory work. The Owner shall be notified prior to disposing of the samples.
- 10.5 A technical memorandum describing the groundwater monitoring well installation shall be prepared. The technical memorandum shall include a description of the drilling and installation of wells and a summary of the field test results. Five (5) copies of the technical memorandum shall be submitted to the Owner, Illinois EPA, and USEPA.
- 10.6 For the purpose of completing a bid estimate, the following assumptions can be used for estimated quantities:
 - 10.6.1 Two hundred and ten (210) lineal feet of drilling and well installation.

Disposal on-site, 1 well	= 60 lf
Perimeter (disposal off-site), 5x30 lf	= 150 lf
 - 10.6.2 Thirty (30) lineal feet of representative soil sampling.
 - 10.6.3 Site drilling and sampling team consists of one engineering geologist/geotechnical engineer/hydrogeologist, and two technicians.
 - 10.6.4 Field hydraulic conductivity tests shall be performed by site sampling team personnel.
 - 10.6.5 All water used or discharged in the drilling process and all drill cuttings can be disposed of on site.

11.0 Groundwater Quality Sampling and Analysis

- 11.1 The Consultant shall provide water quality data for determining whether the groundwater is contaminated with hazardous substances. Water quality samples shall be analyzed for the presence of substances identified in paragraph 11.2. Representative samples shall be obtained from each new monitoring well. Sampling equipment shall be decontaminated between samples. All sampling and testing shall conform to guidelines in the User's Guide to the US EPA CLP prepared by the Sample Management Office of CLP and published in August 1982.
- 11.2 Groundwater samples shall be analyzed for:
 - 11.2.1 Asbestos fibers
 - 11.2.2 Inorganic Analysis Data Sheet (Table 1)
 - 11.2.3 Organic Analysis Data Sheet (Table 2)
 - Non-priority pollutant hazardous substances list compounds may be deleted except of Xylene.
 - 11.2.4 Thiram
- 11.3 A technical memorandum describing the groundwater sampling and analysis program shall be prepared. The memorandum shall recommend whether or not additional groundwater wells and sampling may be required based on the findings. The technical memorandum shall include a description of the sampling procedure, a summary of the laboratory test results, and copies of the laboratory data sheets. Five (5) copies of the technical memorandum shall be submitted to the Owner, Illinois EPA, and USEPA.
- 11.4 For the purpose of completing a bid estimate, the following assumptions can be used for estimated quantities:
 - 11.4.1 Six groundwater samples analyzed.
 - 11.4.2 Twelve (12) subsurface soil samples from the waste fill material shall be taken. Two (2) samples shall be analyzed. These quantities have been included in paragraphs 9.4.3 and 9.4.4.
 - 11.4.3 Site sampling team consists of one geotechnical engineer/engineering geologist/hydrogeologist, and two technicians.
 - 11.4.4 All water purged from the wells during the sampling can be disposed of on site.

Sample No.

INORGANICS ANALYSIS DATA SHEET

LAB NAME _____

CASE NO. _____

LAB SAMPLE ID. NO. _____

QC REPORT NO. _____

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. <u>Aluminum</u>		10. <u>Zinc</u>	
2. <u>Chromium</u>		11. <u>Boron</u>	
3. <u>Barium</u>		12. <u>Vanadium</u>	
4. <u>Beryllium</u>		13. <u>Silver</u>	
5. <u>Cobalt</u>			
6. <u>Copper</u>			
7. <u>Iron</u>			
8. <u>Nickel</u>			
9. <u>Manganese</u>			

TASK-2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. <u>Arsenic</u>		5. <u>Mercury</u>	
2. <u>Antimony</u>		6. <u>Tin</u>	
3. <u>Selenium</u>		7. <u>Cadmium</u>	
4. <u>Thallium</u>		8. <u>Lead</u>	

TASK 3 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)
1. <u>Ammonia</u>	
2. <u>Cyanide</u>	
3. <u>Sulfide</u>	

COMMENTS:

ORGANICS ANALYSIS DATA SHEET

 Laboratory Name: _____
 Lab Sample ID: No: _____

 Case No: _____
 QC Report No: _____

 Multiply Detection Limits by 1 ☐ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP #	CAS #	ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol
(22A)	95-90-7	p-chloro-m-cresol
(24A)	95-57-3	2-chlorophenol
(31A)	120-83-2	2,4-dichlorophenol
(34A)	105-67-9	2,6-dimethylphenol
(57A)	88-73-3	2-nitrophenol
(58A)	100-02-7	4-nitrophenol
(59A)	51-28-3	2,4-dinitrophenol
(60A)	534-32-1	4,6-dinitro-2-methylphenol
(64A)	87-36-3	pentachlorophenol
(65A)	108-95-2	phenol

BASE/NEUTRAL COMPOUNDS

(18)	83-32-9	acenaphthene
(25)	92-87-3	benzidine
(38)	120-32-1	1,2,4-trichlorobenzene
(98)	118-74-1	hexachlorobenzene
(128)	67-72-1	hexachloroethane
(138)	111-44-4	bis(2-chloroethyl) ether
(208)	91-58-7	2-chloronaphthalene
(258)	95-59-1	1,2-dichlorobenzene
(268)	94-73-1	1,3-dichlorobenzene
(278)	106-36-7	1,4-dichlorobenzene
(288)	91-94-1	3,3'-dichlorodiphenyl ether
(338)	121-14-2	2,4-dinitrotoluene
(368)	606-20-2	2,6-dinitrotoluene
(378)	123-66-7	1,2-diphenylhydrazine
(398)	206-44-2	fluoranthene
(408)	7005-72-3	4-chlorophenyl phenyl ether
(418)	101-33-3	4-bromophenyl phenyl ether
(428)	39638-32-9	bis (2-chloroisopropyl) ether
(438)	111-91-1	bis (2-chloroethoxy) methane
(528)	57-63-3	hexachlorocyclopentadiene
(538)	77-47-8	hexachlorocyclooctadiene
(548)	75-59-1	isophorone
(558)	91-20-3	naphthalene
(568)	98-95-3	nitrobenzene
(628)	36-30-4	N-nitrosodiphenylamine
(638)	521-64-7	N-nitrosodipropylamine
(648)	117-81-7	bis (2-ethylhexyl) phthalate
(678)	85-68-7	benzyl butyl phthalate
(688)	34-74-2	di-n-butyl phthalate
(698)	117-34-0	di-n-octyl phthalate
(708)	28-46-2	diethyl phthalate
(718)	131-11-3	dimethyl phthalate
(728)	36-19-3	benzo(a)anthracene

BASE/NEUTRAL COMPOUNDS

PP #	CAS #	ug/l or ug/kg (circle one)
(73B)	90-32-3	benzo(a)pyrene
(74B)	205-99-2	benzo(b)fluoranthene
(75B)	207-08-9	benzo(k)fluoranthene
(76B)	218-01-9	chrysene
(77B)	208-96-8	acenaphthylene
(78B)	120-12-7	anthracene
(79B)	191-26-2	benzo(ghi)perylene
(80B)	86-73-7	fluorene
(81B)	83-01-8	phenanthrene
(82B)	53-70-3	dibenz(a,h)anthracene
(83B)	193-39-3	indeno(1,2,3-cd)pyrene
(84B)	129-00-2	pyrene

VOLATILES

(2V)	107-02-8	acrolein
(3V)	107-13-1	acrylonitrile
(4V)	71-43-2	benzene
(6V)	56-23-5	carbon tetrachloride
(7V)	103-90-7	chlorobenzene
(10V)	107-06-2	1,2-dichloroethane
(11V)	71-33-4	1,1,1-trichloroethane
(13V)	75-34-3	1,1-dichloroethane
(14V)	79-00-3	1,1,2-trichloroethane
(15V)	79-34-3	1,1,2,2-tetrachloroethane
(16V)	75-20-3	chloroethane
(19V)	110-75-3	2-chloroethylvinyl ether
(23V)	67-66-3	chloroform
(29V)	75-23-4	1,1-dichloroethene
(30V)	156-60-3	trans-1,2-dichloroethene
(32V)	78-37-3	1,2-dichloropropane
(33V)	10061-02-6	trans-1,3-dichloropropene
	10061-01-03	cis-1,3-dichloropropene
(38V)	100-61-4	ethybenzene
(44V)	75-29-2	methylene chloride
(45V)	74-87-3	chloromethane
(46V)	74-83-9	bromomethane
(47V)	75-23-2	bromofluoromethane
(48V)	75-27-4	bromodichloromethane
(49V)	75-69-4	fluorotrifluoromethane
(50V)	75-71-8	dichlorodifluoromethane
(51V)	126-81-1	chlorodibromomethane
(85V)	127-18-4	tetrachloroethene
(86V)	105-82-3	toluene
(87V)	79-01-6	trichloroethene
(88V)	75-01-3	vinyl chloride

ORGANICS ANALYSIS DATA SHEET

Sample Number

Laboratory Name: _____

Case No: _____

Sample L.D. No: _____

QC Report No: _____

Multiply Detection Limits by 1 ☐ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(98P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-76-9	chlordane	
(92P)	30-29-3	p,p'-DDT	
(93P)	72-35-9	p,p'-DDE	
(94P)	72-34-8	p,p'-DDD	
(95P)	115-29-7	γ-Endosulfan	
(96P)	115-29-7	δ-Endosulfan	
(97P)	1031-07-3	Endosulfan sulfate	
(98P)	72-20-3	endrin	
(99P)	7821-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-34-6	α-BHC	

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-35-7	β-BHC	
(104P)	319-36-3	δ-BHC	
(105P)	58-39-9	γ-BHC (lindane)	
(106P)	33469-21-9	PCB-1242	
(107P)	11097-49-1	PCB-1254	
(108P)	11104-23-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	5001-35-2	Toxaphene	

DIOXINS

(129B) 1746-01-6 2,3,7,8-tetrachlorodibenzo-p-dioxin

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

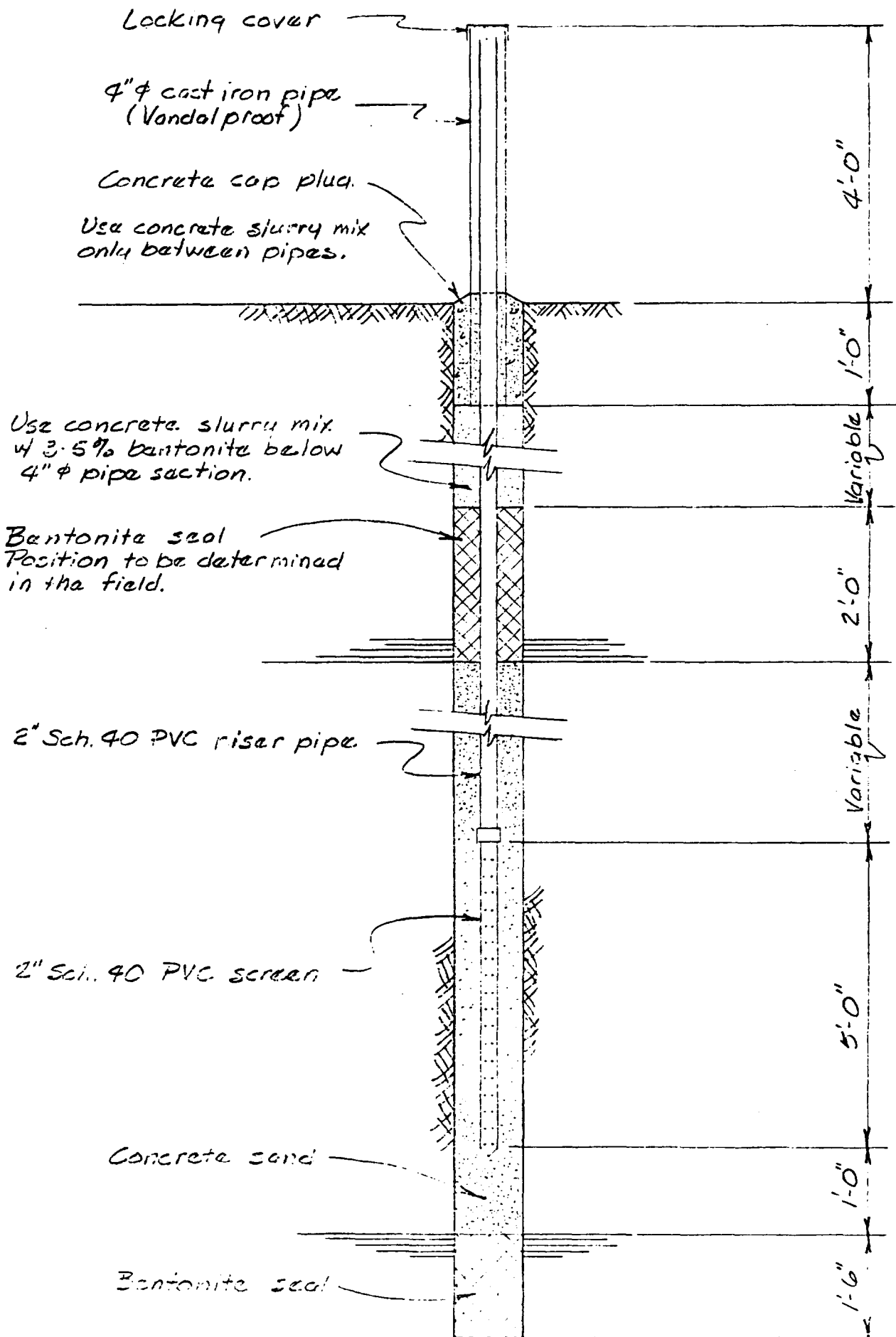
CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	
95-48-7	2-methylphenol	
108-39-4	4-methylphenol	
93-93-4	2,4,6-trichlorophenol	

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	
100-51-6	benzyl alcohol	
106-47-3	4-chloroaniline	
132-64-9	dibenzofuran	
91-57-4	2-methylnaphthalene	
68-76-4	2-nitroaniline	
99-09-2	3-nitroaniline	
100-01-6	benzocarbazine	

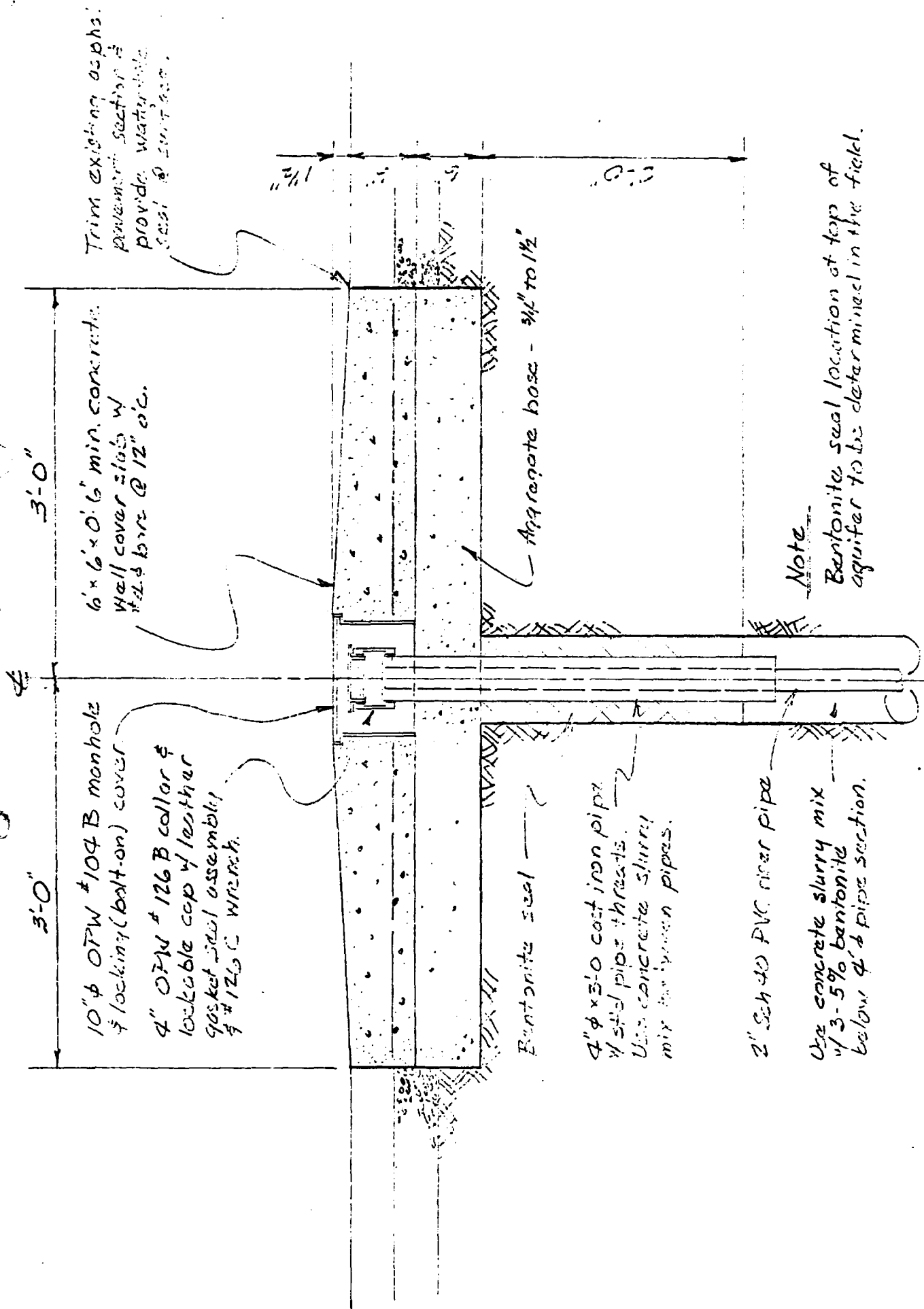
VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	
78-93-3	2-butanone	
75-13-0	Carbendisulfide	
319-78-4	2-hexanone	
108-10-1	4-methyl-2-pentanone	
100-42-5	styrene	
103-35-4	vinyl acetate	
95-47-6	o-xylene	



PROPOSED GROUNDWATER MONITORING WELL

FD, 234, 1982



PROPOSED GROUNDWATER MONITORING WELL
 Typical Detail @ Grade in Paved Areas.

RECORD OF COMMUNICATION		<input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE	
		<input type="checkbox"/> OTHER SPECIFY: _____ <small>(Please print name of person called)</small>	
TO: Rodney D. Gaither, HWEB	FROM: Babette Neuberger ORC 6-6733	DATE: 7-9-85 TIME: 2:20 pm	
SUBJECT: Johns - Manville			
SUMMARY OF COMMUNICATION <p>Babette called me to say that the Consent Decree states that we (the Agency) have 30 days to respond to J-M's comments on the final RI report. I told her I would do that by August 3, 1985, as she requested.</p>			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			